THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA
SCHOOL BOARD ADMINISTRATION BUILDING
1450 Northeast Second Avenue
Miami, FL 33132

Direct all inquiries to Procurement Management Services.

BUYER NAME: O. HOUSER, CPPB
E-MAIL ADDRESS: ohouser@dadeschools.net
PHONE: (305) 995-2349
FAX NUMBER: 305-523-2217
TDD PHONE: (305) 995-2400

BIDDER QUALIFICATION FORM

BID NO. 096-JJ09

BID TITLE Fence and Gates, Furnish and Install District Wide

Bids will be accepted until 2:00 PM on September 24, 2009 in room 351, School Board Administration Building, 1450 NE 2nd Avenue, Miami, FL 33132, at which time they will be publicly opened. Bids may not be withdrawn for 180 days after opening. (Refer to Instructions to Bidders, para. IV.B.)

The submission of the bid by the vendor, acceptance and award of the bid by The School Board of Miami-Dade County, Florida, and subsequent purchase orders issued against said award shall constitute a binding, enforceable contract. Unless otherwise stipulated in the bid documents, no other contract documents shall be issued.

I. BIDDER CERTIFICATION AND IDENTIFICATION

A. I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, or equipment, and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid; and I certify that I am authorized to sign this bid for the bidder.

B. Vendor certifies that it satisfies all necessary legal requirements as an entity to do business with The School Board of Miami-Dade County, Florida.

C. I certify agreement with the School Board of Miami-Dade County Business Code of Ethics, and agree to comply with this Code and all applicable School Board contracting and procurement policies and procedures. (School Board Rule 6Gx13-3F-1.025)

D. I certify that I, nor my company or its principals, or any wholly owned subsidiary are currently debarred or in default of any bid, purchase order or contract with the School board or any other private or governmental entity.

II. INDEMNIFICATION

The Bidder shall hold harmless, indemnify and defend the indemnities (as hereinafter defined) against any claim, action, loss, damage, injury, liability, cost or expense of whatsoever kind or nature including, but not by way of limitation, attorney's fees and court costs arising out of bodily injury to persons, including death, or damage to tangible property arising out of or incidental to the performance of this contract (including goods and services provided thereto) by or on behalf of the Bidder, whether or not due to or caused in part by the negligence or other culpability of the indemnity, excluding only the sole negligence or culpability of the indemnity. The following shall be deemed to be indemnities: The School Board of Miami-Dade County, Florida, its members, officers and employees.

III. PERFORMANCE SECURITY, is required on this bid. YES ☐ NO ☑

Refer to **INSTRUCTIONS TO BIDDERS,** para. VII./IF PERFORMANCE SECURITY IS REQUIRED, PLEASE INDICATE THE TYPE TO BE FURNISHED:

Performance Bond ☐ Check (Cashier's, Certified, or equal) ☐

An original, manual signature is required on the Bidder Qualification Form.
(Bidder is requested to use blue ink, do not use pencil)

Legal Name of Vendor _____

Mailing Address _____

City _____ ***State*** _____ ***Zip Code*** _____

Telephone No. _____ ***Fax No.*** _____

E-mail Address _____

By: Signature (Original)

Of Authorized Representative _____ ***Date*** _____

Name (Typed or Printed)

Of Authorized Representative _____ ***Date*** _____

DISCLOSURE OF EMPLOYMENT OF FORMER SCHOOL BOARD EMPLOYEES

Pursuant to School Board Rule 6Gx13- 3F-1.025, which may be accessed at http://www2.dadeschools.net/schoolboard/rules all bidders, proposers, consultants, and contractors are required to disclose the names of any of their employees who serve as agents or principals for the bidder, proposer or contractor, and who **within the last two years**, have been or are employees of the School Board. Such disclosures will be in accordance with current School Board rules, but will include, at a minimum, the name of the former School Board employee, a list of the positions the employee held in the last two years of his or her employment with the School Board, and the dates the employee held those positions.

NAME	LIST OF POSITIONS	DATES EMPLOYEE HELD POSITION

LOBBYISTS

Board rule 6Gx13-8C-1.21, delineates the policy regarding lobbyists. Pursuant to this rule, lobbyists shall complete annually, a Lobbyist Registration Form, and pay the annual registration fee. The Board rule may be accessed at http://www2.dadeschools.net/schoolboard/rules/.

INSTRUCTIONS TO BIDDERS

NOTICE OF ESTABLISHMENT OF A CONE OF SILENCE

The School Board of Miami-Dade County Public schools enacts a *Cone of Silence* from issuance of a solicitation to written recommendation of award. All provisions of School Board Rule 6Gx13-8C-1.212 apply.

I. PREPARATION OF BIDS

A. BIDDER QUALIFICATION FORM qualifies the bidder and the bid and must be completed and submitted as page 1 and 2 of the bid.

1. PERFORMANCE SECURITY shall not be submitted with the bid. The form of performance security the bidder will submit, when required to do so, must be furnished.
2. BIDDER CERTIFICATION AND IDENTIFICATION. Bid must contain an original manual signature from an authorized representative. An unsigned bid will be considered non-responsive.

B. INSTRUCTIONS TO BIDDERS. Defines conditions of the bid.

1. ORDER OF PRECEDENCE. Any inconsistency in this bid shall be resolved by giving precedence in the following order:
A. Specifications
B. Special Conditions
C. Instructions To Bidders
2. FOR M/WBE designated bids. The SPECIAL CONDITIONS-Minority/Women owned and controlled Business Participation Statement and the M/WBE Certification Application MUST be completed and SUBMITTED with the bid if the bidder is not certified by Miami-Dade County Public Schools. Failure to submit the completed application with the bid will be considered non-responsive.

C. BID PROPOSAL FORM. Defines requirement of items to be purchased, and must be completed and submitted as page 2 and subsequent pages, if any, of the bid. The bidder should indicate his/her name in the appropriate space on each page.

1. ITEM SPECIFICATION. Specifying a certain brand, make or manufacturer is to denote the quality, type, and standard of the article desired. Articles offered must be new merchandise only, of equal or superior grade. On blank lines provided, the bidder is requested to insert the brand name, manufacturer's number and other information necessary to sufficiently identify article offered. Failure to do so may prevent consideration of the item. Also, refer to paragraph *X. Packaging.*
2. **PRICES** are requested in units of quantity specified in the bid specifications. In case of a discrepancy in computing the total amount of bid, UNIT PRICE quoted will govern. All prices bid shall include delivery F.O.B. destination, freight prepaid (bidder pays and bears freight charges. Bidder owns goods in transit and files any claims) and shall include all cartage, drayage, packing, etc., delivered to and unloaded at the receiving station at the site designated in BID PROPOSAL FORMS and there received by the designated agent of the Board.
3. TAXES. The Board does not pay Federal Excise and State taxes on direct purchases of tangible personal property. The applicable tax exemption number is shown on the purchase order. This exemption does not apply to purchases of tangible personal property made by contractors who use the tangible personal property in the performance of contracts for the improvement of Board-owned real property as defined in Chapter 192 of the Florida Statutes.

II. SUBMITTING OF BIDS

A. Bids must be submitted on forms furnished by the Board and in sealed packages or envelopes. Bid submissions must be clearly marked with bid number, bid title and bid opening date.

B. ERASURES OR CORRECTIONS. When filling out the bid proposal form, bidders are required to complete bid proposal in ink.
1. Use of pencil is prohibited.
2. Do not erase or use correction fluid to correct an error.
3. All changes must be crossed out and initialed in ink.

Those bids for individual items that do not comply with items 1, 2 and 3 above will be considered non-responsive for that item(s).

C. PLACE, DATE AND HOUR. Bids shall be submitted by U.S. Mail, Courier/Express Service, or deposited in the BID BOX located in Room 351, 8:00 A.M. to 4:30 P.M., Monday through Friday, SCHOOL BOARD ADMINISTRATION BUILDING, 1450 N.E. Second Avenue, Miami, Florida 33132. Bids received after the date and hour specified in the BIDDER QUALIFICATION FORM will not be considered.

D. PUBLIC ENTITY CRIMES. Section 287.133(2)(a) Florida Statute. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

E. SUBMITTING A "NO BID." If not submitting a bid at this time, return the form entitled "NOTICE TO PROSPECTIVE BIDDERS." Failure to respond, either by submitting a bid or the "NOTICE TO PROSPECTIVE BIDDERS" form for three consecutive times, may result in the company being removed from the School Board's bid list.

F. AVAILABILITY OF BID INFORMATION. Immediately following the public opening, bids will be read, upon request, and then compiled in a tabular form, a copy of which will be available for examination in Procurement Management Services.

III. CANCELLATION OF BIDS OR REQUEST FOR PROPOSALS

An invitation for bids may be canceled, in whole or in part, as may be specified in the solicitation, when it is in the best interest of the Board. The reasons shall be made a part of the master bid file.

A. Prior to opening, a solicitation may be canceled in whole or in part, prior to the date and hour specified in the Bidder Qualification Form for receipt of bids, when the Assistant Superintendent, Procurement Management Services, determines in writing, that such action is in the best interest of the Board for reasons including, but not limited to:

1. The Board no longer requires the supplies, services, or construction;
2. The Board no longer can reasonably expect to fund the procurement;
3. A review of a valid protest filed by a bidder as may be determined by the administrative staff; or
4. Proposed amendments to the solicitation would be of such magnitude that a new solicitation is desirable.

B. When a solicitation is canceled prior to opening, notice of cancellation shall be posted on the District's website, and sent to all businesses solicited, via facsimile or mail. Any bids or proposals received for the cancelled solicitation shall be returned to the vendor unopened.

The notice of cancellation shall:

1. Identify the solicitation;
2. Briefly explain the reason for cancellation; and
3. Where appropriate, explain that an opportunity will be given to compete on any future re-solicitation for procurements of similar supplies, services, or construction.

IV. CHANGE OR WITHDRAWAL OF BIDS

A. PRIOR TO BID OPENING. Should the bidder desire to change or withdraw his/her bid, he/she shall do so in writing. This communication is to be received by the District Director, of Procurement Management, Room 352, School Board Administration Building, prior to date and hour of bid opening. The bidders name, the bid number, the bid title and the date the bid is due must appear on the envelope.

B. AFTER BID OPENING. After bids are opened, they may not be changed, nor withdrawn, for 90 days after the determined opening date, unless otherwise specified on the "BIDDER QUALIFICATION FORM."

C. FAILURE TO ACCEPT BID AWARD. Bidders who, prior to the Bid Award by The School Board of Miami-Dade County, Florida, indicate that they are unable to accept the bid award shall either:

1. Pay to the Board, as liquidated damages, an amount equal to 5% of the unit price bid, times the quantity, or $10, whichever amount is larger, or
2. Lose eligibility to transact new business with the Board for a period of 14 months from the date the Board acts on the withdrawn bid.

V. PROTESTS TO CONTRACT SOLICITATION OR AWARD

A. The Board shall provide notice of a decision or intended decision concerning a solicitation, contract award, or exceptional purchase by electronic posting which can be accessed at the district's website www.dadeschools.net.

B. Any person who is adversely affected by the agency decision or intended decision shall file with the agency a notice of protest in writing within 72 hours after the posting of the notice of decision or intended decision. With respect to a protest of the terms, conditions, and specifications contained in a solicitation, including any provisions governing the methods of ranking bids, proposals, or replies, awarding contracts, reserving rights of further negotiation, or modifying or amending any contract, the notice of protest shall be filed in writing within 72 hours after the posting of the solicitation. The formal written protest shall be filed within 10 days after the date the notice of protest is filed. The formal written protest shall state with particularity the facts and law upon which the protest is based. Saturdays, Sundays, and state holidays shall be excluded in the computation of the 72-hour time periods established herein.

C. The protesting party shall be required to post a bond consistent with F.A.C. Rule 28-110.005(2), and Board Rule 3C-1.11. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

D. Formal, written protests will be reviewed by Procurement Management Services, who will offer the protesting bidder the opportunity to meet and discuss the merits of the protest. If the protest is not resolved, the bidder may seek an administrative hearing pursuant to §120.57 Fla. Stat. Petitions for hearing pursuant to §120.57 Fla. Stat., must be filed in accordance with School Board Rule 6Gx13- 8C-1.064.

VI. AWARDS

A. RESERVATION FOR REJECTION OR AWARD. The Board reserves the right to reject any or all bids, to waive irregularities or technicalities, and to request rebids. The Board reserves the right to award on an individual item basis, any combination of items, total low bid or, if an alternate bid is accepted, on such terms as are specified for the alternate bid, whichever manner is in the best interest of the Board.

The Board reserves the right to utilize other governmental contracts, if in the best interest of the Board.

B. NOTIFICATION OF INTENDED ACTION will be posted on the District's website no later than the Friday preceding a regularly scheduled Board meeting.

C. OFFICIAL AWARD DATE. Awards become official upon the Board's formal approval of the award.

D. TERMINATION FOR CONVENIENCE
The Board reserves the right to terminate this contract at any time and for any reason upon giving thirty (30) days' notice to the other party. If said contract should be terminated for convenience as provided herein, the Board will be relieved of all obligations under said contract. The Board will only be required to pay that amount of the contract actually performed to the date of termination. Upon such payment, both parties shall be relieved of any further obligations under this contract.

E. PURCHASE ORDERS mailed to successful bidders are the official notification to deliver materials described therein; and the time allowed for delivery begins with the date of the purchase order. In the event that the successful bidder fails to deliver the materials in accordance with the terms and conditions of the bid and purchase order, the bidder shall be considered to be in default of the contract and subject to the default provisions stated in Section VI. F.

F. DEFAULT. A vendor who fails to perform according to the terms of the contract (bid) shall be considered in default. In the event of default, which may include, but is not limited to poor performance and/or non-performance, a vendor shall either (1) pay liquidated damages of 10 percent of the unit price of the item(s) awarded times the quantity when no purchase order has been issued, 10 percent of the purchase order when a purchase order has been issued or $100, whichever is greater or (2) lose eligibility to transact new business with the Board for a period of 14 months from date of termination of award by the Board. Bidders that are determined ineligible may request a hearing pursuant to Chapter 120 of the Florida Statutes, and School Board Rule 6Gx13- 8C-1.064. The School Board reserves the right to reject any and all bids from a Vendor who is currently debarred or in default of any bid, purchase order or contract with the School Board or any other private or governmental entity, pursuant to School Board Rule 6Gx13- 3F-1.023.

G. The intent of the bid documents is to include only the written requirements for materials, equipment, systems, standards and workmanship necessary for the proper execution and completion of the work by the Bidder. The bid documents shall not be construed to create an entitlement to any other scope of work except as specified herein.

VII. PERFORMANCE SECURITY (FOR SUCCESSFUL BIDDERS ONLY)

A. PURPOSE. A performance bond or check may be required to guarantee performance.

B. BONDING COMPANY. Performance Bonds shall be written through a reputable and responsible surety bond agency licensed to do business in the State of Florida and with a surety company or corporation meeting both of the following specifications:

1. Awards Greater than $500,000

A minimum rating in the latest revision of Best's Insurance Reports of:

Contract Amount	Minimum Rating by A.M. Best
$ 500,000.01 to $ 2,500,000	None
$ 2,500,000.01 to $ 5,000,000	B + or NA-3
	No Minimum Class
$ 5,000,000.01 to $10,000,000	A- Class IV
$10,000,000.01 or more	A- Class V

Current certificate of authority as acceptable surety on Federal Bonds in accordance with the latest edition of the United States Treasury Department Circular 570 entitled "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" shall be accepted for an amount not exceeding the underwriting limitation thereon.

2. Awards of $500,000 or Less
Bonds shall be written with a surety company or corporation meeting the qualifications as set forth in Paragraph VII.B. above or the qualifications set forth in section 287.0935, Florida Statutes.

C. AMOUNT. When required as defined herein, the firm or individual(s) to whom an award has been made shall execute and deliver to The School Board of Miami- Dade County, Florida, a Performance Bond, Cashier's/Certified Check, or equal.

1. Awards less than $200,000 shall be exempt from performance security.

2. Performance security shall not be required, unless otherwise defined in the bid specifications. If performance security is required, it shall equal 100% of the award amount.

D. RELEASE OF PERFORMANCE SECURITY. Return to the Awardee of his/her cash security, or notification to the Awardee and the bonding company to cancel the performance bond, will be made when all goods/services have been accepted and invoices have been approved for payment

VIII. SAMPLES

When bid samples are required, the buyer will notify bidder to submit samples of the items bid in accordance with the following procedures:

A. All samples must be identified with the bidder's name, bid number, item number, and product name and number. Where non-compliance with this requirement is noted, said item may be considered as being unidentifiable and may not be eligible for consideration in the award recommendation.

B. All samples are to be delivered within 7 calendar days after receipt of notification from buyer, unless otherwise stated in the Special Conditions of the bid. If the bidder does not submit samples by the date and time indicated by the buyer, the bid submitted for that item may not be considered for award.

C. Bidder must obtain, from Materials Testing and Evaluation, a signed receipt acknowledging delivery of samples. Bidder shall include a self-addressed, stamped envelope for return of sample receipt when submitting samples by mail or delivery service. The bidder will receive the original copy of the receipt and the duplicate copy will remain with the Miami-Dade County Public Schools receiving department as the file copy. Bidder shall be solely responsible for delivery of samples and for retaining sample delivery receipts, which must be presented in any dispute regarding receipt of bid samples.

D. Samples should be delivered to the following address:

MIAMI-DADE COUNTY PUBLIC SCHOOLS
MATERIALS TESTING AND EVALUATION
7040 West Flagler Street
Miami, Florida 33144
Telephone Number: 786-275-0780

Miami-Dade County Public Schools will not be responsible for samples sent to a location other than the location mentioned in the bid.

E. PAYMENT FOR SAMPLES. The Board will buy no samples and will assume no cost incidental thereto.

F. RETURN OF SAMPLES. Samples not destroyed in testing may be claimed by unsuccessful bidders 14 days after bid award date and by successful bidders 14 days after final payment; but the Board will assume no responsibility for samples not claimed within the time specified, and it will pay for no samples damaged in testing.

G. EVALUATION AND TEST RESULTS. If a sample submitted for testing does not comply, the buyer will advise the bidder to contact Materials Testing and Evaluation for further details.

IX. SUBSTITUTIONS

Should the bidder find it necessary to use a material, equipment, product or system other than specified, the bidder shall secure from the Board, through Procurement Management Services, written approval for the use of the alternate materials, equipment, product or system. The Board is not obligated to approve requests for substitutions and has the discretion to require the bidder to provide the materials as specified in the bid documents. In no case shall the bidder be entitled to additional time and/or money arising out of the Board's failure to approve requests for substitutions.

X. PACKAGING

A. If packaging is different from that specified, the bidder must note the manner and amounts in which packaging is to be made; otherwise the successful bidder shall furnish packaging as specified. All packaging, wrapping and bundling shall be adequate to insure that materials will be received in undamaged condition. The Board assumes no responsibility for damages of any kind incurred in transit.

B. The following identification shall be printed, stenciled or legibly written in a conspicuous location on each shipping container:

1. Bid Number And/Or Purchase Order Number
2. Vendor's Name And/Or Trademark
3. Name(S) Of Item(S) Contained
4. Item Number(S) With Quantity(ies)

XI. PURCHASES BY OTHER PUBLIC AGENCIES

With the consent and agreement of the successful bidder(s), purchases may be made under this bid by Miami Dade County, Florida, and other governmental agencies or political subdivisions within the State of Florida. Such purchases shall be governed by the same terms and conditions stated herein. This agreement in no way restricts or interferes with the right of any State of Florida Agency or political subdivision to rebid any or all of these items.

XII. RECYCLING REQUIREMENTS

Miami-Dade County Public Schools supports recycling and recommends the use of recycled products where possible. Vendors are requested to submit a letter, along with their bid, indicating whether each item bid and/or its packaging contains pre-consumer or post-consumer waste, and if the product and/or packaging may be recycled.

XIII. ENVIRONMENTAL PRODUCTS

Miami-Dade County Public Schools encourages the use of environmentally safe products.

XIV. DELIVERY AND BILLING

A. DELIVERY. Saturdays, Sundays, and holidays excepted, deliveries shall be made as follows: Schools and Departments - 8:00 A.M. to 3:00 P.M. Merchandise shall be unloaded at the receiving station of the designated delivery point and received there by a designated agent of the Board. A delivery ticket, or one copy of the invoice, prepared as indicated below, shall accompany each delivery.

B. RECEIVING INSPECTION AND TESTING. Delivered items which do not fulfill all requirements will be rejected. Rejected items shall be removed and replaced promptly by the vendor, at no cost to the purchaser.

C. INVOICES. Each invoice shall be issued by the successful bidder and shall be submitted in DUPLICATE to the Accounts Payable Section, P.O. Box 01-2570, Miami, Florida 33101. To be considered for payment, each invoice must show the following information, which appears on the Purchase Order:

1. Purchase Order Number
2. Item Descriptions
3. Quantities and Units
4. Price Extensions
5. Total price of all items on invoice

D. PAYMENT. Unless otherwise specified by Miami-Dade County Public Schools, payment will be made only after delivery, authorized inspection, and acceptance. Payment will be made only to the successful bidder, unless otherwise requested, in writing, by the successful bidder and accepted by Miami-Dade County Public Schools Administration. When bidders are directed to send invoices to a school, the school will make direct payment to the bidder. The bidder expressly agrees that it will properly invoice for any goods or services within one year and that the failure to do so shall constitute a waiver of any right to payment.

XV. NO GRATUITY POLICY

It is the policy of Procurement Management Services not to accept gifts, gratuities, or favors of any kind, or of any value whatsoever, from vendors, members of their staffs, or families.

XVI. COMPLIANCE WITH STATE/FEDERAL REGULATIONS

A. All contracts involving federal funds will contain certain provisions required by applicable sections of CFR 34, Part 80.36(I) and Part 85.510, Florida Statute 257.36, or Florida Administrative Code Chapter 1B. The vendor certifies by signing the bid that the vendor and his/her principals are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in federally funded transactions and may, in certain instances, be required to provide a separate written certification to this effect.

During the term of any contract with the Board, in the event of debarment, suspension, proposed debarment, declared ineligible or voluntarily excluded from participation in federally funded transactions, the vendor shall immediately notify the Assistant Superintendent, Procurement Management Services, in writing. Vendors will also be required to provide access to records, which are directly pertinent to the contract and retain all required records for three years after the Board makes final payment.

B. For all contracts involving Federal funds in excess of $10,000, the Board reserves the right to terminate the contract for cause, as well as for convenience, by issuing a certified notice to the vendor.

XVII. COMPLIANCE WITH LAWS - Bidders shall comply with all federal, State of Florida and local laws applicable to it and the performance of its obligations under this bid.

XVIII. BACKGROUND SCREENING REQUIREMENTS

In accordance with the requirements of Sections, 1012.465, 1012.32, and 1012.467, Florida Statutes, School Board Rules 6Gx13- 3F- 1.024 and 6Gx13- 4C-1.021 as amended from time to time Contractor agrees that, if Contractor receives remuneration for services, Contractor and all of its employees who provide or may provide services under this Contract will complete criminal history checks, and all background screening requirements, including level 2 screening requirements as outlined in the above-referenced statutes and School Board rules prior to providing services to the School Board of Miami-Dade County.

Additionally, Contractor agrees that each of its employees, representatives, agents, subcontractors or suppliers who are permitted access on school grounds when students are present, who have direct contact with students or who have access to or control of school funds must meet level 2 screening requirements as described in the above-referenced statutes, and School Board rules.

Pursuant to the 2007 amendments to the JLA enacted by the Florida Legislature, requirements for certain fingerprinting and criminal history checks shall be inapplicable to non-instructional contracted personnel who qualify for exemption from level 2 screening requirements as provided under § 1012.468, Fla. Stat. (2007). In addition, the provisions of § 1012.467, Fla. Stat. (2007) are incorporated herein by reference, and any provisions of this section that may be inconsistent with, contrary to, or determined to be in conflict with § 1012.467, will be superseded by said statute.

A noninstructional contractor who is exempt from the screening requirements set forth in § 1012.465, § 1012.468 or § 1012.467, Florida Statutes, is subject to a search of his or her name or other identifying information against the registration information regarding sexual predators and sexual offenders maintained by the Department of Law Enforcement under § 943.043 and the national sex offender public registry maintained by the United States Department of Justice. Contractor will not be charged for this search.

Further, upon obtaining clearance by Board, if Board deems necessary, Board will issue a photo identification badge which shall be worn by the individual at all times while on Board property when students are present.

Contractor agrees to bear any and all costs associated with acquiring the required background screening – including any costs associated with fingerprinting and obtaining the required photo identification badge. Contractor agrees to require all its affected employees to sign a statement, as a condition of employment with Contractor in relation to performance under this Bid/RFP, agreeing that the employee will abide by the heretofore described background screening requirements, and also agreeing that the employee will notify the Contractor/Employer of any arrest(s) or conviction(s) of any offense enumerated in School Board Rules 6Gx13- 3F-1.024 and 6Gx13- 4C-1.021 within 48 hours of its occurrence. Contractor agrees to provide the Board with a list of all of its employees who have completed background screening as required by the above-referenced statutes and who meet the statutory requirements contained therein. Contractor agrees that it has an ongoing duty to maintain and update these lists as new employees are hired and in the event that any previously screened employee fails to meet the statutory standards. Contractor further agrees to notify the Board immediately upon becoming aware that one of its employees who were previously certified as completing the background check and meeting the statutory standards is subsequently arrested or convicted of any disqualifying offense. Failure by Contractor to notify the Board of such arrest or conviction within 48 hours of being put on notice and within 5 business days of the occurrence of qualifying arrest or conviction, shall constitute grounds for immediate termination of this Contract by the Board.

The parties further agree that failure by Contractor to perform any of the duties described in this section shall constitute a material breach of the Contract entitling the Board to terminate this Contract immediately with no further responsibility to make payment or perform any other duties under this Agreement.

XIX. COMPLIANCE WITH SCHOOL CODE

Contractor agrees to comply with all sections of the Florida K-20 Education Code, Title XLVIII, Florida Statutes as it presently exists, and further as it may be amended from time to time. Further Contractor agrees that failure to comply with the Florida K-20 Education Code shall constitute a material breach of this Contract and may result in the termination of this Contract by the Board.

XX. CHARTER SCHOOLS

Items or Services awarded under this contract shall be made available to Charter Schools approved by the School Board of Miami-Dade County Public Schools. M-DCPS is not responsible or liable for purchases that may be made by Charter Schools.

XXI. CONFLICT OF INTEREST

Former Miami-Dade County Public Schools employees, classified as Managerial Exempt Personnel, Pay Grade 22 and above, Dade County School Administrators Association, Pay Grade 47 and above, and other equivalent positions, are prohibited from personally representing another person or entity or acting as an agent or attorney for compensation in connection with any matter in which The School Board of Miami-Dade County, Florida, is interested, for two years after the School Board employees' service terminates. This provision is pursuant to School Board Rule 6Gx13 – 4A-1.212 and Florida Statute § 112.313(9).

XXII. PUBLIC RECORDS LAW

Pursuant to Florida Statute, it is the practice of M-DCPS to make available for public inspection and copying any information received in response to an Invitation to Bid or Request for Proposals (RFP). No action on the part of the respondent to a Bid or RFP will create an obligation of confidentiality on the part of the School Board, including but not limited to, making a reference in the response to the trade secret statutes. It is recommended that potential suppliers exclude from their response any information that, in their judgment, may be considered a trade secret.

XXIII. ASSIGNMENT

This Contract may not be assigned nor may any assignment of monies due, or to become due to vendor, be assigned without the prior written agreement of Miami-Dade County Public Schools. If vendor attempts to make such an assignment, such attempt shall constitute a condition of default.

THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA

SUPERINTENDENT OF SCHOOLS

FROM: _____
_____
_____

AFFIX
POSTAGE
HERE

THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA
PROCUREMENT MANAGEMENT SERVICES
ROOM NO. 352 BID BOX
1450 N.E. 2ND AVENUE
MIAMI, FLORIDA 33132

BID NO.: 096-JJ09
BID TITLE: Fence and Gates, Furnish and Install District Wide
BID OPENING DATE: September 24, 2009

THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA
Procurement Management Services

NOTICE OF PROSPECTIVE BIDDERS

NO BID

If not submitting a bid at this time, for informational purpose only, detach this sheet from the bid documents, complete the information requested, fold as indicated, staple, affix postage and return address, and mail. NO ENVELOPE IS NECESSARY.

NO BID SUBMITTED FOR REASON(S) CHECKED AND/OR INDICATED:

Our company does not handle this type of product/service.
We cannot meet the specifications nor provide an alternate equal product.
Our company is simply not interested in bidding at this time.
OTHER, (Please specify) _____
_____
_____

We do not want to be retained on your mailing list for future bids for this type or product and/or service.

Signature _____

Title _____

Company _____

NOTE: **Failure to respond, either by submitting a bid or this completed form, may result in your company being removed from the School Board's bid list. To qualify as a respondent to the bid, vendor must submit a** *NO BID.*

FORM6-1/98

INDEMNIFICATION AND INSURANCE

In consideration of this Contract, if awarded, the Vendor agrees without reservation to the indemnification and insurance clauses contained herein. These clauses are attached to and form a part of Bid# **096-JJ09**

INDEMNIFICATION

The Vendor shall hold harmless, indemnify and defend the indemnitees (as hereinafter defined) against any claim, action, loss, damage, injury, liability, cost or expense of whatsoever kind or nature including, but not by way of limitation, attorneys' fees and court costs arising out of bodily injury to persons including death, or damage to tangible property arising out of or incidental to the performance of this Contract (including goods and services provided thereto) by or on behalf of the Vendor, whether or not due to or caused in part by the negligence or other culpability of the indemnitee, excluding only the sole negligence or culpability of the indemnitee. The following shall be deemed to be indemnitees: The School Board of Miami-Dade County, Florida and its members, officers and employees.

INSURANCE

Prior to being recommended for award, the Vendor has five business days after notification to submit proof of insurance as required herein. **If the Vendor is not the installer of the equipment in question, then the Vendor must obtain evidence of the coverages referenced below from the Installer and submit evidence of such to the Office of Risk and Benefits Management.** Failure to submit a fully completed certificate of insurance signed by an authorized representative of the insurer providing such insurance coverages may cause the Vendor to be considered non-responsive and not eligible for award of the Contract. The insurance coverages and limits shall meet, at a minimum, the following requirements:

1. Commercial General Liability Insurance in an amount not less than $300,000 combined single limit per occurrence for bodily injury and property damage.

2. Automobile Liability Insurance covering all owned, non-owned and hired vehicles used in connection with the operations of the Vendor, in an amount not less than $300,000 combined single limit per occurrence for bodily injury and property damage.

3. Workers' Compensation Insurance for all employees of the Vendor as required by Florida Statutes.

   "The School Board of Miami-Dade County, Florida and its members, officers and employees" shall be an additional insured on all liability coverages except Workers' Compensation Insurance.

The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operations of the Vendor.

All insurance policies shall be issued by companies with either of the following qualifications:

(a) The company must be (1) authorized by subsisting certificates of authority by the Department of Insurance of the State of Florida or (2) an eligible surplus lines insurer under Florida Statutes. In addition, the insurer must have a Best's Rating of "B+" or better and a Financial Size Category of "IV" or better according to the latest edition of Best's Key Rating Guide, published by A.M. Best Company.

or

(b) with respect only to the Workers' Compensation insurance, the company must be (1) authorized as a group self-insurer pursuant to Florida Statutes or (2) authorized as a commercial self-insurance fund pursuant to Florida Statutes.

Neither approval nor failure to disapprove the insurance furnished by the Vendor to the School Board shall relieve the Vendor of the Vendor's full responsibility to provide insurance as required by this Contract.

The Vendor shall be responsible for assuring that the insurance remains in force for the duration of the contractual period; including any and all option years that may be granted to the Vendor. The certificate of insurance shall contain the provision that the School Board be given no less than thirty (30) days written notice of cancellation. If the insurance is scheduled to expire during the contractual period, the Vendor shall be responsible for submitting new or renewed certificates of insurance to the School Board at a minimum of fifteen (15) calendar days in advance of such expiration.

Unless otherwise notified, the certificate of insurance shall be delivered to:

Miami-Dade County Public Schools
Office of Risk and Benefits Management
1500 Biscayne Boulevard, Suite 335
Miami, Florida 33132

The name and address of Miami-Dade County Public Schools, as shown directly above, must be the Certificate Holder on the certificate of insurance.

The Vendor may be in default of this Contract for failure to maintain the insurance as required by this Contract. Any questions and/or inquiries regarding these requirements should be directed to Mrs. La-Chane Faison at 305- 995-7133.

Vendor Information Sheet

1A. _____

Federal Employer Identification Number

Or

_____

Owner's Social Security Number

1B. _____

Name of Firm, Individual(s), Partners or Corporation

_____

Street Address

_____

City State Zip Code

2. Telephone/Fax/Contact Person

_____

Telephone number

_____

Fax number

_____

Contact Person

_____

E-mail address

3. Ownership Disclosure

If the contract or business transaction is with a corporation, partnership, sole proprietorship,or joint venture, the full legal name and business address shall be provided for the chief **officer,** director, or owner who holds, directly or indirectly the majority of the stock or ownership. If the contract or business transaction is with a trust, the full legal name and address shall be provided for each trustee and each beneficiary. **Post Office addresses are not acceptable**.

Name	Title	Address	Gender	Race-ethnicity	Stock Ownership

NOTE: The information provided by the vendor on this form should be consistent with that provided on the "Vendor's Application". All vendors must have a current vendor's application on file with M-DCPS, and have provided information and/or be familiar with M-DCPS' policy regarding the following: (a) Employment Disclosure, (b) Drug Free Workplace, (c) Family Leave Policy, (d) Code of Business Ethics, (e) Conflict of Interest, (f) Perception, (g) Gratuities, and (h) Business Meals. Failure to provide M-DCPS a current vendor application may cause the vendor not to be awarded any new business with M-DCPS. Vendor applications can be downloaded at: http://procurement.dadeschools.net

The School Board of Miami-Dade County, Florida
"License Information / Reference Sheet"

Bidder: _____ Email: _____

Service Representative: _____ Phone: _____

Fax: _____

URL: _____

Street Address _____

Years in Business: _____

City _____ State _____ Zip Code _____

	License Number	Effective/Expiration Date	Check here if attached
Local Business Tax Receipt (formerly Occupational License): Effective Date/Number:			
If applicable for this Trade, Certificate of Compentency, Local or State License *(Provide copy of Drivers License if picture is not displayed on certificate)*			
Please enclose with your bid, (3) References.			
Have you completed the Vendor Information Sheet inside the bid package?			
Did you enclose the "ORIGINAL" copy of the BIDDER QUALIFICATION FORM?			

OTHER OPPORTUNITIES	
M/WBE and Related Services Business Development and Assistance	
305-995-1490	**(Y) - YES or (N) - NO**
Are you interested in becoming a M-DCPS Pre-qualified Contractor?	
Are you interested in becoming a M-DCPS certified Minority/Women Business Enterprises (M/WBE) vendor?	

Please list below the names of the (3) letters of references **you have provide M-DCPS with. Indicate the type of service provided for each client. References will be verified.**

Company	Contact	Address	Phone	Fax	Type of service or repair provided

MIAMI-DADE COUNTY PUBLIC SCHOOLS

BID PROPOSAL FORM *(FORMAT A)* TO: THE SCHOOL BOARD OF MIAMI-DADE COUNTY FLORIDA

BID	BUYER	PAGE
096-JJ09	Oretha Houser, CPPB	SC 1

Fence and Gates, Furnish and Install District Wide

SPECIAL CONDITIONS

1. PURPOSE: The purpose of this bid is to establish a contract, at firm unit prices, for the purchase and installation of chain-link fences, gates, and accessories, and to establish a pool of pre-approved vendors for non-chain link fence work. The term of the bid shall be for one (1) year from the date of award, and may, by mutual agreement between The School Board of Miami-Dade County Florida, and the awardee, be extended for three (3) additional one (1) year periods, and if needed, ninety (90) days beyond the expiration date of the current contract period. The Board, through Procurement Management Services, may, if considering extending, request a letter of intent to extend from the successful bidder(s), prior to the end of the current contract period. However, Procurement Management Services reserves the right to not extend the contract of awardee(s). The successful bidder(s) agrees to this condition by signing its bid.

2. AWARD:

   A. CHAIN-LINK FENCE WORK: The award of Items 1 through 171 shall be made to the first lowest responsive and responsible bidder, who also demonstrates by references and credentials, that they meet the specifications of this solicitation. The first lowest bidder will service the contract as the "Primary" vendor. Three (3) "Alternate" bidders, who also demonstrate by references and credentials that they meet the specifications of this solicitation, may be awarded Items 1 through 171. Bidders must bid all items 1 through 171 in order to be considered for an award. In the event the "Primary" awardee fails to perform, the Board reserves the right to procure work from "Alternate" awardees and/or request current market quotations from the pool of pre-approved awardees.

   The "Primary" and "Alternate" bidders will be utilized to establish a pool of pre-approved vendors for non chain-link fence work. (See Special Condition 2.B.).

   B. NON CHAIN-LINK FENCE WORK: Throughout the term of the bid, as the need arises, the awarded vendors will be requested to submit proposals for any single job exceeding the quotation threshold, for ornamental fence and other non-chain link fence projects. Proposals will be evaluated, and the lowest responsive and responsible bidder will be awarded the specific job.

   M-DCPS reserves the right to award to approved awardees any individual project whose cost is below the threshold established by Miami-Dade County Public Schools' Board Rule 6Gx13-3C-1.111, BIDDING PROCESS -- COMPETITIVE BIDDING REQUIREMENTS, paragraph II, (B), or any amendment thereof.

   In the event contractor(s) are unable to perform, M-DCPS reserves the right to assign work to contractors awarded other contracts.

3. NOTICE OF AGENCY DECISION: A "Notice of Agency Decision" will be published on Procurement Management Services website, for all Request for Quotations that exceed the current "Invitation to Bid value threshold".

SPECIAL CONDITIONS *(CONTINUED)*

4. CONE OF SILENCE: A Cone of Silence is applicable to this competitive solicitation. Any inquiry, clarification or information regarding this bid must be requested in writing by Fax or E-mail to:

   Ms. Oretha Houser, CPPB, Buyer
   Procurement Management
   Fax No. 305-523-2217
   E-mail: ohouser@dadeschools.net

   A copy of this written request must be sent simultaneously to:

   Ileana Martinez, School Board Clerk
   Miami-Dade County Public Schools
   The Office of Superintendent of Schools
   1450 N.E. 2nd Avenue, Room 268B, Miami, Florida 33132
   Fax No. 305-995-1448
   E-mail: martinez@dadeschools.net

   THE DEADLINE FOR ANY INQUIRY, CLARIFICATION, OR INFORMATION REGARDING THIS BID IS ONE (1) WEEK PRIOR TO THE DUE DATE FOR BID SUBMITTALS. THIS WILL ALLOW M-DCPS SUFFICIENT TIME TO ADDRESS ALL INQUIRIES.

5. BID ADDENDUMS: All bidders should monitor continuously, M-DCPS, Procurement and Materials Management website for any addendums that may be posted, prior to the opening of this solicitation. The Procurement and Materials Management website, which list all bids, addendums, and award information, is as follows:

   http://procurement.dadeschools.net/

6. PRE-BID CONFERENCE: A non-mandatory pre-bid conference will be held Wednesday, September 9, 2009 at 9:30 a.m. in Maintenance Operations Training Center, 12525 NW 28 Avenue, Miami, Florida. Pre-Bid Conference attendance by the bidder or his qualified representative is highly encouraged. Questions regarding the bid contents will be addressed at the Pre-Bid Conference.

7. ESTIMATED QUANTITIES: The estimated quantities provided in the bid proposal are for bidder's guidance only. No guarantee is expressed or implied, as to the quantities that will be used during the contract period. The School Board of Miami-Dade County, Florida is not obligated to place an order for any given amount, subsequent to the award of this bid. Estimates are based upon M-DCPS's actual needs and usage during a previous contract period, and include an additional ten (10) percent to cover unanticipated increases in requirements.

SPECIAL CONDITIONS *(CONTINUED)*

8. ESCALATION/DE-ESCALATION CLAUSE: Subsequent extensions of this contract shall incorporate a cost escalation/decrease as measured by the Construction Cost Index (CCI) published in the Engineering News Record. This escalation/decrease shall be equal to the percentage increase (or decrease) of the twelve month average of the CCI immediately prior to the month of award or renewal, as compared to the ten month average after the award or renewal, commencing the month of award or renewal. The Board, through Procurement Management Services reserves the right to reject price increases due to budget constraints and/or in accordance with Special Condition 1.

9. MASTER SPECIFICATIONS: M-DCPS current Master Specifications Guidelines 02830 and 02832 are attached. M-DCPS reserves the right to add additional acceptable products as approved brands throughout the term of the bid and/or delete previously approved brands that are no longer acceptable by M-DCPS.

10. MATERIAL SAFETY DATA SHEET: As per Florida Statutes, Chapter 442 (Right-to-Know Law), Material Safety Data Sheets (MSDS) are required for materials specified in the Specifications. Bidders are requested to submit material safety data sheet(s) within five (5) days of request. Failure to supply a MSDS in the allotted time, may subject the vendor to default for non-compliance.

11. SPECIAL WARRANTY: All work performed by the vendor shall be warranted for a period of one (1) year after final acceptance. All work, material and hardware shall be free from defects and structurally sound during the entire warranty period. The vendor at no cost to M-DCPS shall correct all defective material, improper workmanship, and other substandard conditions documented by M-DCPS within the warranty period.

12. INSURANCE REQUIREMENTS: Successful vendor(s) are required to have insurance coverage, as specified in the Indemnity and Insurance form(s), attached hereto and made a part of this bid. The successful vendor(s) must submit completed Certificate of Insurance form(s), before being recommended for award. Failure to submit this form(s), as noted, will result in the vendor(s) not being recommended for the bid award.

    A Certificate of Insurance, naming The School Board of Miami-Dade County, Florida as an "additional insured" can be faxed to the Risk and Benefits Management at 305-995-7199 or mailed to:

Miami-Dade County Public Schools Office of Risk and Benefits Management 1500 Biscayne Boulevard, Suite 335 Miami, FL 33132	Phone: 305-995-7133 Fax: 305-995-7199

13. CODES AND PERMITS: All work performed and materials used shall comply with all applicable federal, state and local codes, laws, ordinances and regulations. The successful vendor(s) shall be responsible for, and obtaining all necessary licenses and permits, as may be required.

SPECIAL CONDITIONS *(CONTINUED)*

14. PROTECTION OF PERSONS AND PROPERTY: The vendor shall initiate, maintain and supervise safety precautions and programs in performing the work. Protect vendor's employees, vendor's materials, equipment and work, M-DCPS property, and building occupants. M-DCPS shall not be responsible for vendor's failure to protect persons and property.

15. SITE INSPECTIONS SUBSEQUENT TO AWARD: Throughout the term of the bid, awardees are require to make site inspections fence work will be performed, to familiarize themselves with the unique environment where the work is to take place, and to establish work procedures to minimize disruption of the school day, and avoid damage to existing infrastructure.

    Scheduling of visits (Site Scope Meetings) to the various locations throughout the term of the contract, will be coordinated, to insure access, and to review specifications regarding normal workload, average job size, problems, safety considerations, or other conditions that are unique to the Miami-Dade County Public School System. Failure to consider these conditions shall not entitle the awarded vendor to additional compensation. All Site Scope Meetings (SSM) scheduled for individual projects are "mandatory". Failure to attend scheduled SSM's will result in the rejection of proposal, if submitted for a project.

16. VENDOR INFORMATION SHEET: All bidders are required to complete the attached Vendor Information Sheet. In order to conduct new business under this bid, M-DCPS requires that the vendor(s) have a current vendor application on file. The information on both these documents must be consistent. Failure to comply with this condition may cause the bidder(s) not to be awarded any new business. Vendor applications can be downloaded at http://procurement.dadeschools.net/.

17. UNAUTHORIZED SHIPMENTS/SUBSTITUTION: Unauthorized substitutions and shipments shall be grounds for termination. Vendors shall be considered in default of the contract and shall be required to pay liquidated damages or lose eligibility to transact new business with the Board for a period of fourteen (14) months from the date of termination by the Board. Random samples may be taken from each delivery for testing, to insure continued compliance with the specifications.

18. LOCAL BUSINESS TAX RECEIPT: Any person, firm, corporation or joint venture, with a business location in Miami-Dade County, Florida, which is submitting a bid, shall meet the County's Local Business Tax Receipt requirements in accordance with Miami-Dade County, Florida code. Bidders with a location outside Miami-Dade County shall meet their local Occupational Tax requirements. A copy of the license should be submitted with the Bid. If the Bidder has already complied with this requirement a new copy is not required while the license is valid and in effect. It is the Bidder's responsibility to resubmit a copy of a new license after expiration or termination of the current license. Non-compliance with this condition may cause the bidder to not to be considered for award.

SPECIAL CONDITIONS *(CONTINUED)*

19. NON-EXCLUSIVITY CONTRACTS: Purchases may be made at lower prices on other M-DCPS bids, State of Florida contracts, and/or other state, local and political subdivision governmental contracts. M-DCPS reserves the right to bid or quote separately any item(s), if the awarded vendor(s) fail to perform or if deemed to be in the best interest of the School Board. The Board reserves the right to award other contractors and/or perform work herein described with its employees.

20. REFERENCES: Bidder(s) are required to submit three letters of (3) references from past or present companies they have contracted with, for the same type of work being solicited. (See License Information / Reference Sheet).

    References may be from other school districts or large establishments within the past thee (3) years, and shall include name, address, contact person, phone and fax numbers, and length of contract, in order to verify satisfactory performance. Failure to do so may result in the bidder not being considered for award. Unsatisfactory performance reports provided by references may result in the bidder not being awarded a contract.

21. CERTIFICATE OF COMPETENCY: The bidder shall hold a valid Certificate of Competency (CC) in fence installation issued by Building and Zoning, Miami-Dade County, or be a Certified General Contractor (CGC), registered with Miami-Dade County. Bidders shall complete the section included herein as evidence of this requirement. The Certificate of Competency (CC) or Certified General Contractor (CGC) shall be current at the time of bid opening and throughout the life of the contract, or the Bidder will be disqualified.

22. EMERGENCY RESPONSE: Where an emergency situation is deemed to exist by the M-DCPS authorized representative, the vendor will be required to respond on a verbal confirmation to proceed issued by Procurement Management Services, or the M-DCPS authorized representative, if so designated. The response must result in the arrival of a work crew at the affected site within four hours. At the discretion of the M-DCPS authorized representative, this response time may be increased to one calendar day. Failure to respond in a timely manner to an emergency shall constitute grounds for termination of this award.

23. DELIVERIES: Deadlines for the delivery and installation shall be determined by the size and complexity of the job. M-DCPS will assign work completion dates with each project. A vendor's inability to complete work by the mutually agreed upon completion date reflected in the Notice To Commence (NTC), may subject vendor to default for poor performance and/or failure to perform as agreed upon. The Project Manager will make a recommendation to Procurement Management Services to initiate default proceedings.

24. SUBMITTAL OF PROPOSALS FOR WORK: Proposals submitted throughout the term of the bid for individual projects must contain the name of school or facility, bid number 096-JJ09, quantity, bid line item number (if applicable), description, price as bid, and proposal number (if applicable). Any deviation from this requirement may result in the rejection of proposal for review and/or acceptance. The originating department will reflect the requested information on the purchase requisition generated for the project.

SPECIAL CONDITIONS *(CONTINUED)*

25. INVOICING AND PAYMENT: The payment terms of the District are Net 30 (N/30) days after receipt and acceptance of work performed. Invoices are requested to contain the purchase order/release number, bid number 096-JJ09, quantity, bid line item number, description, price as bid, and proposal number (if applicable). (See Specifications, PART 1 INVOICING, 1.12). All original invoices must be sent to the Project Manager for review and release of payment:

    Any deviation from this requirement may result in the rejection of your invoice for payment, until properly corrected.

26. TOTAL LOW BIDDING: Bidders indicating $0.00 for any line item in a total low group, certifies that the item is at no cost to the Board. Should the bidder receive an award, vendor agrees to supply and install $0.00 items at no cost to the Board, in any quantity required by the Board. Failure to supply any item at the bid price, including $0.00, will subject the vendor to default, in accordance with Instructions To Bidders VI. AWARDS, F. DEFAULT.

27. SUBCONTRACTING: The Prime Contractor (hereinafter referred to as the "Contractor") may utilize subcontractor(s) for performance of certain of its functions under the Contract provided that M-DCPS is notified in writing of the name(s) of all proposed subcontractors at least 5 business days prior to the execution of any such subcontract agreement. M-DCPS reserves the right to make an objection to any proposed subcontractor, and will notify the Contractor in writing of its rejection of a proposed subcontractor. Notwithstanding any subcontract, the Contractor shall remain fully responsible for all work performed under the Contract resulting from this Bid and the Contractor shall be SOLELY RESPONSIBLE for paying the Subcontractor. The approval of a Subcontractor by M-DCPS shall not in any way relieve the Contractor of any responsibility for the full performance of its duties, and to pay its Subcontractors.

    All Subcontractors shall maintain on file with the Office of Risk and Benefits Management, a current Certificate of Insurance, and shall not perform work on Board property if said Certificate is not current, valid and/or meet the Insurance Specifications of this bid. All staff and employees of the Subcontractor shall undergo fingerprinting and background check prior to commencement of work, in accordance with Instructions To Bidders XVIII – BACKGROUND SCREENING REQUIREMENTS.

    No subcontract agreement shall serve to create any contract or other relationship between the subcontractor and M-DCPS nor shall it create any duties or obligations to the Subcontractor on the part of M-DCPS. The Contractor shall be solely liable to the Subcontractor for all expenses and liabilities under the Contract resulting from this Bid. In addition, any disputes which may arise between Contractor and any Subcontractor must be resolved between those parties, and M-DCPS will not undertake or be responsible for the resolution of such disputes. However, to protect the District's public image and interest, Contractor's with repeated complaints/allegations reported by subcontractors, suppliers, and/or employees to the District, may subject that vendor to a non-extension of contract, if deemed in the best interest of the District.

28. BID SUBMITTAL: Bidders are requested to submit the original bid and proof of all information requested, in accordance with SPECIFICATION 1.05 VENDOR QUALIFICATIONS AND REQUIREMENTS and SPECIAL CONDITION 21. CERTIFICATE OF COMPETENCY/STATE CERTIFICATION. Please provide information on the "License Information and Reference Sheet" included in this bid.

SPECIAL CONDITIONS *(CONTINUED)*

29. DEFAULT: In the event of default, which may include, but is not limited to non-performance, unauthorized product substitutions, poor performance, and/or non-compliance with warranty repairs the awardee(s) shall lose eligibility to transact new business with the Board for a period of fourteen (14) months from date of termination of award by the Board, or pay liquidated damages as described in Instructions To Bidders VI. AWARDS, F. DEFAULT.

BID PROPOSAL FORM (FORMAT B)

Type or print the complete name of the Bidder in this box.	NAME OF BIDDER:
Bid No. 096-JJ09	
Title: Fence and Gates, Furnish and Install District Wide	

	Buyer: Oretha Houser, CPPB				
ITEM	**DESCRIPTION OF ITEM**	**EST. QTY.**	**UOM**	**UNIT PRICE**	**MFG. / MODEL NO.**
	Items 1 through 171 to be awarded on total low bid basis, to a "Primary" Contractor and three (3) "Alternate" bidders. (See Special Condition 2. A. and B.)			**$**	**Please list in the column below, the manufacturer brand name you propose to provide with the installation service of each line item. Example: Master Halco #000 or Master Halco. Please note, whatever brand you plan to provide, technical specifications must be provided with the bid or within 5 business days upon request.**
	CHAIN-LINK FENCES, 4', 6', 8', 10', 12, AND 16' HIGH.				
	4' high chain-link fence including top rail, installed as specified except for end posts, corner posts, gates and gate posts, bollards and baffles.				
1	Installation of 0 to 250 linear feet.	1,000	LF	$ /LF	
2	Installation over 250 linear feet.	1,500	LF	$ /LF	
	Post for 4' high fence. Installed as specified with footers, caps, top rail, and all attaching hardware.				
3	End posts with braces.	20	Each	$ /EA	
4	Corner posts with braces.	30	Each	$ /EA	
5	Pull posts with braces.	4	Each	$ /EA	
6	Double baffle.	10	Each	$ /EA	
7	Single baffle.	10	Each	$ /EA	
	4' single swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keepers.				
8	3' wide gate opening.	3	Each	$ /EA	
9	4' wide gate opening.	10	Each	$ /EA	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
10	6' wide gate opening.	10	Each	$ /EA	
	4' double swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keeper.				
11	6' wide gate opening.	3	Each	$ /EA	
12	8' wide gate opening.	3	Each	$ /EA	
13	10' wide gate opening.	10	Each	$ /EA	
14	12' wide gate opening.	10	Each	$ /EA	
15	14' wide gate opening.	3	Each	$ /EA	
16	20' wide gate opening.	4	Each	$ /EA	
17	24' wide gate opening.	4	Each	$ /EA	
	4' rolling gates, complete with gate posts, braces, caps, latches, stops and keepers.				
18	10' wide gate opening.	4	Each	$ /EA	
19	12' wide gate opening.	4	Each	$ /EA	
20	14' wide gate opening.	4	Each	$ /EA	
21	20' wide gate opening.	4	Each	$ /EA	
22	24' wide gate opening.	4	Each	$ /EA	
	6' high chain-link fence including top rail, installed as specified except for end posts, corner posts, gates and gate posts, bollards and baffles.				
23	Installations of 0 to 250 linear feet.	4,000	LF	$ /LF	
24	Installations over 250 linear feet.	10,000	LF	$ /LF	
	Post for 6' high fence. Installed as specified with footers, caps, top rail, and all attaching hardware.				
25	End posts with braces.	39	Each	$ /EA	
26	Corner posts with braces.	78	Each	$ /EA	
27	Pull posts with braces.	20	Each	$ /EA	
28	Double baffle.	7	Each	$ /EA	
29	Single baffle.	7	Each	$ /EA	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
	6' single swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keepers.				
30	3' wide gate opening.	3	Each	$ /EA	
31	4' wide gate opening.	10	Each	$ /EA	
32	6' wide gate opening.	10	Each	$ /EA	
33	8' wide gate opening.	3	Each	$ /EA	
	6' double swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keeper.				
34	6' wide gate opening.	7	Each	$ /EA	
35	8' wide gate opening.	7	Each	$ /EA	
36	10' wide gate opening.	10	Each	$ /EA	
37	12' wide gate opening.	10	Each	$ /EA	
38	14' wide gate opening.	10	Each	$ /EA	
39	20' wide gate opening.	4	Each	$ /EA	
40	24' wide gate opening.	4	Each	$ /EA	
	6' rolling gates, complete with gate posts, braces, caps, latches, stops and keepers.				
41	10' wide gate opening.	4	Each	$ /EA	
42	12' wide gate opening.	4	Each	$ /EA	
43	14' wide gate opening.	4	Each	$ /EA	
44	20' wide gate opening.	4	Each	$ /EA	
45	24' wide gate opening.	4	Each	$ /EA	
	8' high chain-link fence including top rail, installed as specified except for end posts, corner posts, gates and gate posts, bollards and baffles.				
46	Installations of 0 to 250 linear feet.	2,000	LF	$ /LF	
47	Installations over 250 linear feet.	500	LF	$ /LF	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
	Post for 8' high fence. Installed as specified with footers, caps, top rail, and all attaching hardware.				
48	End posts with braces.	20	Each	$ /EA	
49	Corner posts with braces.	30	Each	$ /EA	
50	Pull posts with braces.	10	Each	$ /EA	
51	Double baffle.	4	Each	$ /EA	
52	Single baffle.	4	Each	$ /EA	
	8' single swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keepers.				
53	3' wide gate opening.	3	Each	$ /EA	
54	4' wide gate opening.	4	Each	$ /EA	
55	6' wide gate opening.	4	Each	$ /EA	
56	8' wide gate opening.	4	Each	$ /EA	
	8' double swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keeper.				
57	6' wide gate opening.	4	Each	$ /EA	
58	8' wide gate opening.	4	Each	$ /EA	
59	10' wide gate opening.	4	Each	$ /EA	
60	12' wide gate opening.	4	Each	$ /EA	
61	14' wide gate opening.	4	Each	$ /EA	
62	20' wide gate opening.	4	Each	$ /EA	
63	24' wide gate opening.	4	Each	$ /EA	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
	8' rolling gates, complete with gate posts, braces, caps, latches, stops and keepers.				
64	10' wide gate opening.	3	Each	$ /EA	
65	12' wide gate opening.	3	Each	$ /EA	
66	14' wide gate opening.	3	Each	$ /EA	
67	20' wide gate opening.	3	Each	$ /EA	
68	24' wide gate opening.	3	Each	$ /EA	
	10' high chain-link fence including top rail, installed as specified except for end posts, corner posts, gates and gate posts, bollards and baffles.				
69	Installations of 0 to 250 linear feet.	500	LF	$ /LF	
70	Installations over 250 linear feet.	1,000	LF	$ /LF	
	Post for 10' high fence. Installed as specified with footers, caps, top rail, and all attaching hardware.				
71	End posts with braces.	10	Each	$ /EA	
72	Corner posts with braces.	10	Each	$ /EA	
73	Pull post with braces.	4	Each	$ /EA	
74	Double baffle.	4	Each	$ /EA	
75	Single baffle.	4	Each	$ /EA	
	10' single swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keepers.				
76	3' wide gate opening.	3	Each	$ /EA	
77	4' wide gate opening.	3	Each	$ /EA	
78	6' wide gate opening.	3	Each	$ /EA	
79	8' wide gate opening.	3	Each	$ /EA	
	10' double swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keeper.				
80	6' wide gate opening.	3	Each	$ /EA	
81	8' wide gate opening.	3	Each	$ /EA	
82	12' wide gate opening.	3	Each	$ /EA	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
83	14' wide gate opening.	3	Each	$ /EA	
84	20' wide gate opening.	3	Each	$ /EA	
85	24' wide gate opening.	3	Each	$ /EA	
	10' rolling gates, complete with gate posts, braces, caps, latches, stops and keepers.				
86	6' wide gate opening.	3	Each	$ /EA	
87	8' wide gate opening.	3	Each	$ /EA	
88	10' wide gate opening.	3	Each	$ /EA	
89	12' wide gate opening.	3	Each	$ /EA	
90	14' wide gate opening.	3	Each	$ /EA	
91	20' wide gate opening.	3	Each	$ /EA	
92	24' wide gate opening.	3	Each	$ /EA	
	12' high chain-link fence including top rail, installed as specified except for end posts, corner posts, gates and gate posts, bollards and baffles.				
93	Installations of 0 of 250 linear feet.	500	LF	$ /LF	
94	Installations over 250 linear feet.	1,500	LF	$ /LF	
	Post for 12' high fence. Installed as specified with footers, caps, top rail, and all attaching hardware.				
95	End posts with braces.	10	Each	$ /EA	
96	Corner posts with braces.	10	Each	$ /EA	
97	Pull posts with braces.	10	Each	$ /EA	
98	Double baffle.	4	Each	$ /EA	
99	Single baffle.	4	Each	$ /EA	
	12' single swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keepers.				
100	3' wide gate opening.	4	Each	$ /EA	
101	4' wide gate opening.	4	Each	$ /EA	
102	6' wide gate opening.	3	Each	$ /EA	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
103	8' wide gate opening.	3	Each	$ /EA	
	12' double swing gates, installed as specified with gate posts, braces, hinges, caps, latches, stops and keeper.				
104	6' wide gate opening.	3	Each	$ /EA	
105	8' wide gate opening.	3	Each	$ /EA	
106	10' wide gate opening.	3	Each	$ /EA	
107	12' wide gate opening.	3	Each	$ /EA	
108	14' wide gate opening.	3	Each	$ /EA	
109	20' wide gate opening.	3	Each	$ /EA	
110	24' wide gate opening.	3	Each	$ /EA	
	12' rolling gates, complete with gate posts, braces, caps, latches, stops and keepers.				
111	10' wide gate opening.	3	Each	$ /EA	
112	12' wide gate opening.	3	Each	$ /EA	
113	20' wide gate opening.	3	Each	$ /EA	
114	24' wide gate opening.	3	Each	$ /EA	
	Installation of three strand barbed wire and extension arms on an existing fence.				
115	Installation of barbed wire 0 to 250 linear feet.	250	LF	$ /LF	
116	Installations of barbed wire over 250 linear feet.	1,000	LF	$ /LF	
117	Installations of extension arms 0 to 250 linear feet.	1,000	LF	$ /LF	
118	Installations of extension arms over 250 linear feet.	2,000	LF	$ /LF	
	Installation of Top Rail.				
119	6' fence top rail.	12,000	LF	$ /LF	
120	Top rail on fence over 6'.	4,000	LF	$ /LF	
	Installation of Mid Rail.				
121	8' fence or greater.	2,438	LF	$ /LF	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
	Removal of existing fenc includes fabric, posts, gates, footings, bracing, all barbed wire if present, and all fence line debris. Removal of 0 to 250 linear feet.				
122	4' fencing.	8,000	LF	$ /LF	
123	6' fencing.	3,000	LF	$ /LF	
124	8' fencing.	1,000	LF	$ /LF	
125	10' fencing.	500	LF	$ /LF	
126	12' fencing.	500	LF	$ /LF	
127	Removal of 3 strands barbed wire only.	500	LF	$ /LF	
	Removal of existing fence includes fabric, posts, gates, footings, bracing, all barbed wire if present, and all fence line debris. Removal of over 250 linear feet.				
128	4' fencing.	5,000	LF	$ /LF	
129	6' fencing.	4,000	LF	$ /LF	
130	8' fencing.	1,000	LF	$ /LF	
131	10' fencing.	500	LF	$ /LF	
132	12' fencing.	500	LF	$ /LF	
133	Removal of 3 strands barbed wire only.	500	LF	$ /LF	
	Removal and replacement of chain-link fabric and barbed wire, 0 to 250 linear feet.				
134	4' Fabric.	1,000	LF	$ /LF	
135	6' Fabric.	1,000	LF	$ /LF	
136	8' Fabric.	1,000	LF	$ /LF	
137	10' Fabric.	500	LF	$ /LF	
138	12' Fabric.	500	LF	$ /LF	
139	Removal of 3 strands barbed wire only.	500	LF	$ /LF	
	Removal and replacement of chain-link fabric and barbed wire, over 250 linear feet.				
140	4' Fencing.	1,000	LF	$ /LF	
141	6' Fencing.	1,000	LF	$ /LF	
142	8' Fencing.	1,000	LF	$ /LF	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
143	10' Fencing.	500	LF	$ /LF	
144	12' Fencing.	500	LF	$ /LF	
145	Removal of 3 strands barbed wire only.	500	LF	$ /LF	
	Installation of Temporary Fence.				
146	Install 0 to 250 linear feet.	2,000	LF	$ /LF	
147	Install over 250 linear feet.	2,000	LF	$ /LF	
148	Install 0 to 250 linear feet. (with barbed wire).	2,000	LF	$ /LF	
149	Install over 250 linear feet. (with barbed wire).	2,000	LF	$ /LF	
	Removal of Temporary Fence.				
150	Removal of 0 to 250 linear feet.	2,000	LF	$ /LF	
151	Removal of over 250 linear feet.	2,000	LF	$ /LF	
152	Removal of 0 to 250 linear feet. (with barbed wire).	2,000	LF	$ /LF	
153	Removal of over 250 linear feet. (with barbed wire).	2,000	LF	$ /LF	
	Core Drilling.				
154	4" Diameter.	30	Each	$ /EA	
155	6" Diameter.	60	Each	$ /EA	
156	8" Diameter.	60	Each	$ /EA	
	Bollard Traffic Control.				
157	Bollard, traffic control, 4" O.D., galvanized Schedule 40 pipe, filled and domed with 3,000 PSI concrete. Bollard shall be plumb and centered in a 3,000 PSI concrete footer, minimum size 18" x 18" x 36" deep.	40	LF	$ /LF	
158	Bollard, traffic control, 6-5/8" O.D., galvanized Schedule 40 pipe, filled and domed with 3,000 PSI concrete. Bollard shall be plumb and centered in a 3,000 PSI concrete footer, minimum size 24" x 24" x 36" deep.	40	LF	$ /LF	
	Remove and Replace Single Line Post.				
159	4' High.	10	Each	$ /EA	
160	6' High.	10	Each	$ /EA	

ITEM	DESCRIPTION OF ITEM	EST. QTY.	UOM	UNIT PRICE	MFG. / MODEL NO.
161	8' High.	10	Each	$ /EA	
162	10' High.	4	Each	$ /EA	
163	12' High.	4	Each	$ /EA	
164	16' High.	4	Each	$ /EA	
	16' high chain-link fence installed as specified except for end posts, corner posts, gates and gate posts, bollards and baffles.				
165	Installations of 0 to 500 linear feet. Line posts shall be 3.0" outside diameter. Footings shall be 3' 0" deep.	200	LF	$ /LF	
166	Installations over 500 linear feet. Line posts shall be 3.0" outside diameter. Footings shall be 3' 0" deep.	1,000	LF	$ /LF	
	Post for 16' high fence. Installed as specified with footers, caps, top rail, and all attaching hardware.				
167	Install end posts which shall be 4.0" outside diameter, and include braces. Footings shall be 3' 6" deep.	10	Each	$ /EA	
168	Install corner posts which shall be 4.0" outside diameter, and include braces. Footings shall be 3' 6" deep.	10	Each	$ /EA	
169	Install pull posts which shall be 4.0" outside diameter. Footings shall be 3' 6" deep.	4	Each	$ /EA	
	Miscelleanous Not-In-Contract (NIC) work incidental to chain-link fence projects.	**The "Assumed" quantities shown below are to establish an estimated budget value for NIC work.**			
170	Single firm-fixed hourly labor rate to provide "Not-In-Contract" "NIC" work incidental to fence projects. BIDDER SHALL NOT BID MULTIPLE RATES.	2,000	ASSUMED LABOR HOURS	$ /PER HOUR	
171	Single firm-fixed materials cost percentage mark-up. BIDDER SHALL NOT BID MULTIPLE RATES.	$75,000	ASSUMED MATERIALS COST	___ % MARK-UP ON MATERIAL COSTS	

02830 CHAIN LINK FENCES AND GATES

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Specifier: This section replaces 02831 (2004). It reflects significant changes in and additions to ASTM documents in recent years that relate to chain link fence and gates.
It does not include fabric screens attached to some chain link fences at locations such as tennis courts. Any kind of permanent screen added to a chain link fence should be analyzed by a structural engineer so that breakaway in 70 mph winds can be ensured (and increased post sizes specified as needed) .
However, plastic slats, as sometimes inserted in chain link fabric at primary play yards, or to screen mechanical equipment, can be specified here.
Only protective bollards that are within 10 ft of a chain link fence are specified here. Other bollards around the site are specified in 05500.
Do not design chain link fences with barbed wire except when needed in agriculture education facilities. Their use otherwise is prohibited by FBC / SREF.
For the rare instance in which a horizontal slide gate is needed, a skeleton article has been included to help the specifier get started in specifying the type that is wanted.
CSI MasterFormat 2004 number: 32 31 10
An optional keynote to the Drawings follows major product titles, for A/Es using National CAD Standard.

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PART 1 GENERAL

1.1 RELATED REQUIREMENTS

A. Coordinate chain link fence & gate work with work before and after. See especially:
   1. Bollards on worksite that are more than 10 ft from fence 05500

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM): Specifications for
   1. A121-07 Metallic-Coated Carbon Steel Barbed Wire.
   2. A123A-08 Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
   3. A392-07 Zinc-Coated Steel Chain Link Fence Fabric.
   4. A641-09 Zinc-Coated (Galvanized) Carbon Steel Wire.
   5. A817-07 Metal-Coated Steel Wire for Chain Link Fence Fabric & Tension Wire.
   6. A824-05 Metal-Coated Steel Marcelled Tension Wire for Chain Link Fence.
   7. C94-07 Ready-Mix Concrete.
   8. F567-07 Standard Practice for Installation of Chain Link Fence.
   9. F626-08 Fence Fittings.
   10. F1043-08 Strength & Protective Coatings on Steel Chain Link Fence Framework.
   11. F1083-08 Pipe, Steel, Hot Dip Zinc-Coated, Welded, for Fence Structures.
   12. F1184-05 Industrial and Commercial Horizontal Slide Gates.

B. American Society of Mechanical Engineers (ASME) / American National Standards Institute (ANSI) joint standard:
   1. B36.10 Welded and Seamless Wrought Steel Pipe.

1.3 SUBMITTALS Follow 01330

A. Product Data.
   1. Chain link fence and components, including producer's installation instructions.
   2. Schedule of treatment, primer and enamel for painting bollards as selected from the MDCPS Paints approved list.
   3. Draft of Special Warranty from chain link fence & gates producer to Board.

B. Shop Drawings.
   1. Layout and details of corner, end post, gate, gate post, and baffle construction, including types and sizes of members, fabric, fastenings and fittings.
   2. Show gate leaf sizes and bracing, gate swings, which items of hardware are welded to gate leafs in shop, and the location of keepers and stops at end of swing.
   3. Show closer spacing of posts where narrower bays are needed to keep sloping bottom rails close to sloping grades.
   4. Identify any bays where tension wire has been approved by A/E.
   5. Show the location of items of bollard-protected equipment that are within 10 ft of the new chain link fence; then show site-specific bollard quantities and locations. When approved, this establishes the initial quantity of bollards to be provided.

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SPECIFIER: Delete the following unless rarely-used fabric and slats are actually required by Board.
****

C. Samples.
   1. Colored chain link fabric and plastic slats, in colors selected by A/E.

1.4 SECURITY

A. Maintain the worksite in secure condition as follows:
   1. At the beginning of each work day, remove temporary fence, barricades, and other security items from that portion of the worksite perimeter where the new permanent chain link fence work will be done that day.
   2. Before the end of each work day, protect the entire facility using temporary chain link fence or plastic mesh barricades that surround safety hazards and create a continuous worksite fence perimeter at least 6 ft high.
   3. When a continuous temporary perimeter fence cannot be provided during installation of new fence, provide the services of a licensed security guard to the extent directed by the Board until the security of a full perimeter fence is restored.

1.5 SPECIAL WARRANTIES Follow 01786

A. Chain Link Fence Assembly – Material Only
   1. Scope of Special Warranty: Replace defective galvanized steel items within the chain link fence and gates assembly, such as posts, rails, braces, fittings, fabric, fasteners, hardware, and accessories.
      a. “Defective”: Galvanized steel items in the assembly that develop red rust over more than 5% of its surface during warranty period.
      b. The chain link fence manufacturer shall be named as the entity issuing the limited warranty in the interest of the Board – Miami-Dade County Public Schools.
      c. In satisfying the warranty the manufacturer shall provide material replacing rusted components, without paying for delivery, tax, or the labor of removing/replacing.
   2. Special Warranty period / duration: From date of Substantial Completion of the Work until 12 years after that date
   3. Exceptions.
      a. Damage from improper design or use; accidents, acts of God, and abuse.
      b. Only galvanized steel components supplied by the chain link fence and gates manufacturer are covered under this warranty.

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SPECIFIER: Delete the following warranty unless this rarely-used finish has actually been specified.
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B. Chain Link Fence Fabric and Posts with Color Powdercoat Finish – Material Only
   1. Scope of Special Warranty: Replace chain link fence and gate fabric and posts with defective color powdercoat.
      a. "Defective": Any galvanized steel fabric and posts that develop red rust over more than 5% of their surface during warranty period.
      b. The assembly's manufacturer shall be named as the entity issuing the limited warranty in the interest of the Board.
      c. In satisfying the warranty the manufacturer shall provide material replacing rusted components, without paying for delivery, tax, or the labor of removing/replacing.
   2. Special Warranty period / duration: From date of Substantial Completion of the Work until 12 years after that date.

C. Exceptions.
   1. Damage from improper design or use; accidents, acts of God, and abuse.
   2. Only components with color powdercoat finish supplied by the chain link fence and gates manufacturer are covered under this warranty.

PART 2 PRODUCTS Follow 01600

2.1 CHAIN LINK FENCE AND GATES [02830.clf]

A. Description.
   1. Fence and baffles. Steel chain link fabric on galvanized steel pipe posts, with other steel pipe framing, such as rails and bracing, with wires and fastenings and steel or iron fittings, all items galvanized.
   2. Gates. Steel chain link fabric on welded steel pipe frames and bracing, with fastenings and steel hardware, all items galvanized.
   3. Bollards associated with fence work. Concrete filled galvanized pipe, painted, with concrete foundations. Other bollards are specified in 05500.
   4. Chain link fence and gate work also includes, only when and to the extent shown in the Construction Documents, such items as colored chain link fence fabric, colored slats, barbed wire, and horizontal slide gates.

2.2 TEMPORARY FENCING [02830.tclf]

A. Posts and Bracing: At least NPS 1-1/2 line and NPS 2-1/2 end / corner / pull / gate posts, non-corroding, driven in compacted soil sufficient to hold fence in place against fabric-stretching and wind forces, with rails and bracing.
   1. Provide the posts and their bracing in quantity and spacing as needed to secure the site against unauthorized entry during construction.
   2. Where soil does not keep posts vertical under forced entry, rain softening, or wind loads on fence, set posts in concrete footings.

B. Fabric: Non-corroding fabric with knuckled edges; 6 ft x 2 in. mesh x 11 ga (0.120 in. diameter) wire or heavier. Tie fabric to posts, bracing and rails so that fabric is within 2 in. of ground, using galvanized steel ties.

C. Gates: Provide 6 ft. high, lockable, non-sagging gates in quantity and width as needed to give access to the site by authorized users.

2.3 CHAIN LINK FABRIC

A. Description. Hot dip galvanized after weaving (GAW) steel chain link fabric.
   1. Do not use: Aluminum, aluminum alloy wire, or aluminum coating.
   2. Average zinc weight on wire: Not less than 2.0 oz / ft^2, galvanized after weaving.
   3. Wire size: 9 ga, 0.148 in. diameter
   4. Breaking strength of 9 ga wire: Not less than 1290 lb; ASTM A817.
   5. Mesh: 2 in.
   6. Edges: Knuckle fabric at top and bottom of fence.

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SPECIFIER: Delete the following unless colored fabric is specifically directed by the Board.

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   7. Provide colored fabric only as required by Construction Documents and specified in Colored Fabric and Slats following.

B. Standard:
   1. Wire strength: ASTM A817, Table 2.
   2. Wire coating: ASTM A123, Table 2, Coating Grade 85.
   3. Fabric: ASTM A392, Class 2 zinc coating. Do not use Class 1 (1.2 oz / ft^2).

C. Producer.
   1. Master Halco.
   2. Merchants Metals.
   3. Stateside Steel and Wire.
   4. Equal product in quality and performance approved by A/E and Board.

2.4 FENCE POSTS, CAPS, AND FOOTING DIMENSIONS

A. Description. Zinc galvanized round steel pipe and post caps.
   1. Steel pipe: ASTM F1043, Group IC, f_y = 50,000 lb/in^2.
   2. Do not use: Channel-formed steel, square steel pipe, or aluminum posts.
   3. Zinc coat: At least 1.8 oz / ft^2 hot dip galvanizing after forming; ASTM A123.
      a. Do not use: SS40 zinc coating.
   4. Post loop caps. Provide on line posts and where needed to let top rail pass.
   5. Post dome caps: Provide on corner, end, pull, and gate posts.
   6. Pipe size convention: Nominal pipe size (NPS); ASME/ANSI B36.10.

B. Standards:
   1. Post galvanizing: ASTM A123, Table 2, Coating Grade 85.
   2. Post dimensions: ASTM F1083, Table 1, Standard Weight, Schedule 40.
   3. Fence post sizes: ASTM F1043, from Table 3 or larger as specified.
   4. Gate post sizes: ASTM F567, from Table 2 or larger as specifed.

C. Line Post Size Schedule.

Height above grade	10 & 12 ft	6 & 8 ft	4 ft

NPS (Nominal Pipe Size)	2-1/2	2	1-1/2
Pipe OD (outside diameter), in.	2.875	2.375	1.900
Pipe wall thickness, in.	0.203	0.154	0.145
Post spacing, ft oc	10	10	10
Minimum footing depth, in.	36	30	24
Minimum footing diameter, in.	12	10	8

D. Corner, End, and Pull Post Schedule.

Height above grade	10 & 12 ft	6 & 8 ft	4 ft
NPS	4	3-1/2	2
Pipe OD, in.	4.500	4.000	2.375
Pipe wall thickness, in.	0.237	0.226	0.154
Minimum footing depth, in.	36	36	30
Minimum footing diameter, in.	18	16	10

E. Gate Post Schedule for Gates over 6 ft High.

Gate leaf width	8-1 to 10 ft	4-1 to 8 ft	up to 4 ft
NPS	4	3-1/2	3
Pipe OD, in.	4.500	4.000	3.500
Pipe wall thickness, in.	0.237	0.228	0.216
Minimum footing depth, in.	36	36	30
Minimum footing diameter, in.	18	16	14

F. Gate Post Schedule for Gates up to 6 ft High.

Gate leaf width	8-1 to 10 ft	4-1 to 8 ft	up to 4 ft
NPS	3	2-1/2	2
Pipe OD, in.	3.500	2.875	2.375
Pipe wall thickness, in.	0.216	0.203	0.154
Minimum footing depth, in.	36	36	30
Minimum footing diameter, in.	14	12	10

G. Producer.
1. Allied Fence / Tyco.
2. Master Halco.
3. Merchants Metals.
4. Sonco Worldwide.
5. Equal product in quality and performance approved by A/E and Board.

2.5 BRACES AND RAILS

A. Description. Zinc galvanized steel pipe.
1. Accessories, such as truss rods, turnbuckles, rail sleeves, bolts, washers, and nuts: Hot dip galvanized steel.
2. Size: NPS 1-1/4 in., OD 1.660 in., 0.140 in. wall thickness.
3. Zinc coat: At least 1.8 oz / ft^2 hot dip galvanizing after forming; ASTM A123.

B. Standards:
1. Pipe galvanizing: ASTM A123, Table 2, Coating Grade 85.
2. Pipe dimensions: ASTM F1083, Table 1, Standard Weight, Schedule 40.

C. Producer.
1. Allied Fence / Tyco.

2. Master Halco.
3. Merchants Metals.
4. Sonco Worldwide.
5. Equal product in quality and performance approved by A/E and Board.

2.6 FASTENINGS AND ACCESSORIES

A. Description. Zinc galvanized steel (or malleable iron) fastenings and accessories with rounded edges, galvanized after fabrication. Do not use aluminum.
   1. Zinc coat: At least 1.8 oz / ft^2 hot dip galvanizing after forming; ASTM A123.

B. Rail and Brace Ends, Line Caps, Rail Sleeves, Tension and Brace Bands: Sized to fit posts and rails; ASTM F626.

C. Stretcher Bars, Tension Bars: At least 3/16 x 3/4 in. galvanized steel, 2 in. shorter than full height of fabric, 1 bar at gate or end posts,:2 bars corner or pull posts.

D. Fastenings. Hot dip galvanized steel; ASTM F626. (For spacing, see PART 3)
   1. Tie Wire: 9 ga, for attaching fabric to posts.
   2. Clips: 9 ga.
   3. Bands 12 ga, at end, corner, pull, and gate posts
   4. Hog rings: 12 ga hot dip galvanized steel (use only where approved by Board)..
   5. Brace rods: Galvanized steel, with welded-on turnbuckles for adjustment.

E. Tension Wire: Marcelled 7 ga (0.177 in.) galvanized steel wire; ASTM A824, Type II.
   1. Zinc coating: 2.00 oz/$ft^{2;}$ ASTM A817, Type II, Class 5.
   2. Breaking strength of 7 ga wire: Not less than 1880 lb; ASTM A817.

F. Zinc Repair Compound, for use at missing or damaged zinc galvanizing. High adhesion, zinc-rich, UV-resistant compound, such as ZRC.

G. Concrete: f'_c = 2500, 5 in. maximum slump; ASTM C94.

2.7 GATE FABRICATION AND HARDWARE

A. Framing Assembly: Galvanized steel pipe, together with fabric, bracing, hinges and latches, shop assembled and welded.
   1. Gate heights: Match adjacent fence height, unless shown otherwise.
   2. Gate framing and fixed bracing: At least NPS 2, galvanized, as specified above.
   3. Brace gates against sagging using brace rods and adjustable turnbuckles in place of fixed bracing if more practical than fixed braces.
   4. For gate leafs over 73 in. high, add one hinge to the number specified.
   5. Coat welds and bare spots with specified zinc repair compound.

B. Gate Hardware: Steel or malleable iron, zinc coated with at least 1.8 oz / ft^2 hot dip galvanizing, for all items. Typical examples follow:
   1. Hinges: Heavy duty, industrial grade, offset type, of ball and socket design, allowing gates to swing back parallel to the fence line, such as:
      a. 1746 / 1747 / 1748, by Semmerling Fence & Supply.
      b. 422405 / 422406 / 422407, by Southeastern Wire.
      c. Equal product in quality and performance approved by A/E and Board.
   2. Latches, all heights: Easily lockable with padlock(s).

a. Padlocks, with chains, will be provided by the Board.

3. Latches for single leaf gates: Single gate latch assembly, with keeper.
4. Latches for twin leaf gates: Heavy duty gate stops with steel pipe sleeves anchored in concrete so as to engage plunger of latch at the center of each opening. Latch and plunger shall not be removable without special tools.

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SPECIFIER: Where keepers present a tripping hazard, the Board's representative may allow a chained snap hook as the keeper.

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5. Keepers: To automatically engage the gate leaf and hold it in the open position until manually released. Where A/E or Board determines that a keeper's location presents a tripping hazard, provide a chained snap hook instead.
6. Stops: Set in a concrete base, located so as not to present a tripping hazard.
7. Rods with turnbuckles:: Cut rods to length that gives maximum future adjustability and weld turnbuckles to rods and rods to gate frame.
8. Items for handicapped accessibility: Heavy-duty lever-type gate hardware or weatherproof push bar in place of latches.

C. Gate Hinge Schedule.

Gate leaf width	8-1 to 10 ft	4-1 to 8 ft	4 ft or less
Number of hinges, leafs over 6 ft high	4	4	3
Number of hinges, leafs up to 6 ft high	3	3	2

2.8 BOLLARDS

A. Description. Galvanized steel pipe filled with concrete; tops domed 2 in. above pipe.
1. Pipe size: NPS 6.
2. Pipe: Galvanized steel; ASTM F1083, Table 1, Schedule 40.
3. Zinc coat: At least 1.8 oz / ft^2 hot dip galvanized; ASTM A123.
4. Paint for bollards: Zinc neutralizer, galvanized metal primer, and exterior acrylic latex enamel (Safety Yellow) as listed in MDCPS Paints (list is available from MDCPS Materials Control).

****

SPECIFIER: Delete the following article for all facilities except where required by the Educational Specifications for schools with K and pre-K children.

****

2.9 COLORED FABRIC AND SLATS

A. Colored Chain Link Fabric. UV-resistant color olefin powdercoat over an intermediate zinc phosphate coat on zinc galvanized steel pipe, in pipe sizes as specified above for post, rails and bracing. Color: As selected by A/E.
1. Do not use vinyl-coated fence fabric.
2. Product / Producer: Permafused II, by Master Halco, or equal product in quality, appearance and performance as approved by A/E and Board.

B. Colored Plastic Slats. UV-resistant color HDPE olefin plastic, in color as selected by A/E.
1. Product / Producer. Colored Fence Slats, by Filona, or equal product in quality, appearance and performance approved by A/E and Board.

****

SPECIFIER: Delete the following article for all facilities except where required by the Educational

Specifications for some schools with agricultural programs.
Do NOT use barbed wire in any other situation, no matter how much security is desired.
Where extension arms are needed, select either inside-the fence or outside-the-fence location.
****

2.10 BARBED WIRE

A. Barbed Wire Extension Arms: Steel, holding 3 strands of barbed wire at a 45º angle from 4 to 12 in. above and [inside] [outside] of the fence's top rail, hot dip galvanized after fabrication. Provide specially shaped arms at corners.

B. Barbed Wire: Double strand 12.5 ga (0.099 in. diameter) twisted steel wire with 14 ga (0.080 in.), 4-point barbs woven in 5 in. oc, all hot dip zinc galvanized after weaving.
   1. Do not use: Aluminum, aluminum alloy wire, or aluminum coating.
   2. Standard: ASTM A121, Type Z, Standard Grade, Design No. 12-4-5-14R.

****
SPECIFIER: If the Educational Specifications call for a manual (or mechanized) horizontal slide gate, which is infrequent, complete the article below – otherwise delete the following article in its entirety..
Do not use wheeled swinging gates (gate leafs with wheel at end) or vertical lift gates.
****

2.11 HORIZONTAL SLIDE CHAIN LINK GATE

A. Description. Galvanized steel pipe framed gate, shop assembled and welded. With shop attached chain link fabric, guides, hardware and aids to operation..
   1. Gate height and gate fabric: Match adjacent fence.
   2. Size of frames and bracing: At least NPS 2, OD 2.375 in., 0.145 in. wall thickness; ASTM F1083, Table 1, Standard Weight, Schedule 40.
   3. Zinc coat: At least 1.8 oz / ft^2 hot dip galvanized after forming; ASTM A123.
   4. Coat welds with specified zinc repair compound.
   5. Tracks and guides for manual operation: With wheels above or below, as will open and close gate easily.

****
SPECIFIER: In some rare cases a mechanized gate may be required by Educational Specifications.
Complete and add to the following as needed. Otherwise, delete what follows.
Mechanized gates are most often either card, push-button, or radio controlled, which you must coordinate with designing a properly sized electric power outlet near the gate's operating equipment.
If qualified sources are known, add a Product / Producer paragraph as C. below.
Also coordinate with signage and the security system for the facility.
Add Special Warranty provisions to PART 1 in format similar to other warranties.
Write appropriate mechanized gate installation language in PART 3 of this section.
****
   6. Mechanized operation:
   7. Speed of operation: At least 40 ft/minute.
   8. Wheels: Permanently lubricated galvanized steel, with solid rubber tires.
   9. [Card controls and cards] [Radio controls and radio activators] [Push-button controls]: _____ .

B. Standard: ASTM F1184.

PART 3 EXECUTION Follow 01700

3.1 PREPARATION

A. Underground Clearances: Before starting chain link fence and gate work, obtain underground locations, depths and clearances of underground utilities, pipes, cables and structures from utility companies and the Construction Documents. Probe before drilling for footings in questionable locations.

B. Remove Existing Fences: Remove existing chain link fences not shown to remain. Also remove other types of fence shown in Construction Documents to be replaced by chain link.
   1. Perform unearthing, disassembling, collecting, and disposing of all existing fence posts, fabric, hardware, footers, keepers, stops, and debris accumulated along the fence line.
   2. Fill holes and surface irregularities created by fence removal to reduce trip hazard.

3.2 TEMPORARY FENCING

A. Temporary Fencing. Provide NPS 2 or larger driven posts and 6 ft. high with 11 ga or heavier fabric tied with 11 ga steel ties. Provide gates as specified for permanent construction, adjustable against sagging but without mid-rails.
   1. Coordinate so as to maintain security requirements specified in PART 1.

B. Removal of Temporary Fencing. Remove temporary fencing when A/E and Board state that levels of other security are sufficient to do so. Remove fencing and post foundations. Fill, tamp and level post foundation holes to ensure no trip hazard.
   1. Remove trash, vegetation (except grass that matches adjacent new sod) and ground level irregularities within 1 ft of x entire length of the former temporary fence line.

3.3 INSTALLATION

A. Overall Chain Link Fence and Gate Assembly:
   1. Follow ASTM F567 and chain link fence producer's published instructions except as more stringently specified herein.
   2. Install components of the assembly plumb and level, except as needed to closely follow vertical contours of the site.
   3. Rails. Provide a top rail and a bottom rail at all intervals between posts (and a mid-rail where specified).
   4. Adjust post spacing to accommodate bottom rails. Where the ground level slopes, decrease the normal 10 ft spacing between posts to as little as 3 ft in order to be able to install bottom rails that will hug the contour of the paving or soil.
      a. Definition of “hug”: Keep average bottom-of-fence dimension within 1 in. of grade as measured in any 1 ft of run but never more than 2 in.
   5. Tension wire. Do not replace a bottom rail with a tension wire unless severe grade changes make this more practical. Obtain written approval of A/E and Board before installing any tension wire.
      a. Where a tension wire is approved, tie fabric to wire not more than 16 in. oc.
   6. Alignment. Align new fencing with existing fencing. Where obstructions are encountered, obtain instructions from A/E and Board. Keep the top of fabric line straight and level, except as needed to conform the fence to slopes and to make the bottom of fabric hug the surface of paving or soil – never more than 2 in. above it.

B. Footing Excavation. Excavate to the exact size specified, in compacted soil, so that concrete will socket in firm soil or rock.
   1. Post footing diameters: Not less than 4 x the OD of the post.
   2. Form sides of holes if they are unstable.
   3. Excavate for each footing so that the top of the footing concrete is the specified distance below grade, and so that the bottom of each post, at its correct elevation, has 6 in. of concrete beneath it.
   4. Do not lose excess excavated soil on site. Remove excess soil from site unless Board designates a fill location on site – to which deliver the excess excavation.

C. Footings: Set posts in concrete, then fully rod or vibrate after posts have been raised to required level. No post bottom shall rest within 6 in. of soil beneath.
   1. Place and temporarily support posts that have been cut to required height + required underground length. Set in concrete so that post tops are at the level needed to support chain link fabric with no more than a 2 in. bottom gap between the fabric and the underlying soil, grass or paving.
   2. Slope tops of footings at least 1 in. to shed water, whether above or below grade.
   3. Installing posts in soil or rock. Place concrete so that footing tops are 2 in. below grade. Place and tamp soil over cured footing tops so that bare soil or sod will be level with adjacent soil or sod.
   4. Posts in bituminous paving. Place concrete so that footing tops are 2 in. below grade. Backfill with well-tamped asphaltic concrete to match existing paving.
   5. Posts in areas to be concrete paved: Install footings and posts before paving.
   6. Install footings for all posts except those temporary fence posts that can be driven

D. Fence Post Installation. Install initially so that posts are plumb, and tops are above the finished fence height. Then cut post tops to a line parallel to the ground profile, along the entire fence line.
   1. Install post caps when the footings have set up and the posts have been cut, to prevent the accumulation of moisture in each post.

E. Braces and Rails.
   1. Braces. Install horizontal bracing at every end, corner, gate, and pull post.
   2. Top and Bottom Rails. Provide at all fence height. Install to run continuously between line, corner, gate, pull, and end posts at permanent fencing fences.
   3. Grade changes. Where there are large changes in ground level, space line posts closer than 10 ft to allow bottom rail to conform to grade.
      a. A tension wire, in place of the bottom rail, may be used at large changes of ground level if approved by A/E and Board.
   4. Center rails. Provide at fences 8 ft and higher.
      a. Install to run continuously between line, corner, gate, pull, and end posts.
      b. Install mid-rail at the fence's half height level.

F. Bracing Installation. Brace end, corner and pull posts sufficiently to stretch fabric and to provide stability against wind and forced entry forces.
   1. Install bracing in both directions from each corner, end and pull post, inclined no more than 50º from ground, with concrete footings at bracing ends to resist pulling thrust.
   2. In addition, provide pull-post bracing, at a post sized for pulling forces, every 200 ft in straight fence runs.
   3. Attach brace halfway up end, corner and pull posts.
   4. Fasten horizontal bracing members with truss rods from end, corner and pull posts to the adjacent line post.

G. Fabric and Fastener Installation.
   1. Fabric. Place fabric on outside of posts in the longest practicable rolls.
      a. Join rolls by weaving a single picket into the ends of the rolls.
      b. Stretch fabric to remove slack before fastening and to provide a smooth, uniform appearance.
      c. Set edge of fabric 0 to 2 in. above ground level.
   2. Stretcher bars. Provide 1 tension bar for each gate or end post and 2 bars for each corner or pull post. Attach stretcher bars (2 in. shorter than fabric height) with tension bands and no protruding ends: Space no more than 15 in. oc.
   3. Wire ties. Attach fabric, with at least 2 full twists in wire, to:
      a. Line posts, top to bottom: Space no more than 15 in. oc;
      b. Braces and horizontal rails: Space no more than 15 in. oc;
   4. Bands. Attach fabric to top, center and bottom of the following posts:
      a. End, corner, pull, and gate: Space no more than 15 in. oc.
   5. Hog rings. For attaching bars or fabric and only where approved by A/E and Board.
      a. Bars: Space no more than 15 in. oc.
      b. Fabric: Space no more than 15 in. oc.
   6. If these maximum permissible spacings cannot be maintained, obtain instructions from A/E and Board before continuing installation.

H. Eliminate Sharp Edges and Ends.
   1. Knuckle fabric and tie wire terminal ends. Turn ends away from the traffic side of fence. Assemble drip points, bolts, truss rods, posts, and hardware so that their sharp edges are directed away from the traffic side of the fence and so that they do not project more than 1/2 in. on the non-traffic side.
   2. At non-agricultural educational plants, barbed or purposely sharpened edges are not allowed from the highest grade level up to the 7 ft level along any fence.
   3. File down and apply galvanizing compound, or remove and replace, components that are erected with sharp or pointed surfaces or edges.

I. Double Baffles Protecting Twin Access Ports in Fence:
   1. Construct each 24 ft long double baffle, consisting of 2 end posts, bracing, 2 line posts, and fabric. Provide top and bottom rail.
   2. Center the baffles on each pair of 4 ft access ports in the fence.
   3. To construct the twin access ports in the fence,
      a. Lay out end posts in the fence line to form 2 ports, each 4 ft wide, with 8 ft of fence separating the ports (16 ft from extreme port jamb to extreme port jamb).
   4. Set the 24 ft double baffle to form an exactly 2 ft clear opening between baffle inside and the fence outside to allow lateral bicycle-walking passage between the two.
   5. Baffle construction: Match the post, bracing, and fabric qualities specified for fence.

J. Single Baffles Protecting Single Access Ports in Fence.
   1. 12 ft long single baffle: Construct using 2 end posts, bracing, 1 line post, and fabric. Provide top and bottom rail.
   2. Center each single baffle on a single 4 ft access port in the fence.
   3. To construct the single access port in the fence, lay out end posts in the fence line to form a 4 ft wide port.
   4. Set the 12 ft single baffle to form an exactly 2 ft clear opening between baffle inside and the fence outside to allow lateral bicycle-walking passage between the two.
   5. Baffle construction: Match the post, bracing, and fabric qualities specified for fence.

K. Gate Installation.

1. Gates in the vicinity to a building shall open in the direction of building egress.
2. No gate shall reduce or restrict a building egress dimension in its open position.
3. Make gates level and plumb in their closed position.
4. Make gates so they can be secured in both their open and closed positions.
5. Install gates complete with welded-on hinges, latches, keepers, and stops. Weld on hasps for locking with a lock provided by MDCPS Central Lock Dept.
6. Do not swing a gate outward onto a public sidewalk; instead, notify A/E and Board that for safety the gate must either swing inward or a sliding gate considered.

L. Bollard Quantities and Locations. (See shop drawing submittal requirement.)
1. Quantity of bollards and scope of their location. Provide bollards to protect each of the following items in site that are up to 10 ft inside or outside of a run of new chain link fence and within 6 ft of vehicular traffic or parking.
2. Items on to be protected by bollards as part of chain link fence and gate work:
   a. On each side of each new chain link fence gate post: 2 bollards.
   b. Protecting each new or existing fire hydrant, pressure reduction valve, transformer, electrified sign, guy wire, trash bin or trash storage area, or other equipment: 4 bollards arranged to minimize possible damage from vehicles,
      1) The 4 required bollards will be reduced to 2 in particular locations if A/E and Board determine that protection from 2 bollards is adequate.
      2) After the Board directs reducing the number of bollards at any location from 4 to 2, move construction of the 2 “extra” bollards and their footings to another location on the worksite as directed by Board.
   c. Bollards are not required at single-post signs, light poles or utility poles unless shown on Drawings or directed by Board as location of “extra” bollards.
3. Precise location: Locate as directed and approved by A/E and Board if precise location is not already shown on the Drawings or approved shop drawings.
   a. Review bollard locations with A/E and Board before start of fence installation.

M. Bollard Footing and Bollard Installation. .
1. Bollard footings: 18 in. OD x 36 in. deep concrete placed around each bollard.
2. Bollards: Construct 3 to 6 ft: from each item being protected.
3. For the immediate safety of gate posts and items of mechanical-electrical-utility equipment on site, paint bollards by neutralizing galvanized surfaces, then painting them with 1 coat of galvanized metal primer + 2 coats of acrylic latex enamel.
   a. Color of top coat: Safety Yellow.
   b. Other preparation and painting requirements are specified in 09900.
4. Additional bollards for location on the worksite more than 10 ft. from chain link fence are specified in 05500.

3.4 CLEANING AND ADJUSTING

A. At completion of each day's work, remove all fencing debris, cuttings and removed fencing not claimed by the Board from the worksite, roads, walks, and adjoining properties.

B. Adjust gates and hardware for friction-free, noise-free alignment between gates and posts. Lubricate, and demonstrate to be in smooth, quiet working order. ///

SECTION 02832

STEEL FENCES AND GATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Ornamental picket fencing and accessories.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM) Publications:

1. A500-93 Specification for Cold-formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
2. A513-92 Specification for Electric-resistance-welded Carbon and Alloy Mechanical Tubing.
3. A653-96 Specification for Steel Sheet, Zinc-coated (Galvanized) or Zinc-iron Alloy-coated (Galvannealed) by the Hot-dip Process, Structural (Physical) Quality.
4. A924-96a Specification for General Requirements for Steel Sheet, metallic-coated by the Hot-dip Process .
5. A1011-02 Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability
6. B695-91 Specifications for Coatings of Zinc Mechanically Deposited on Iron and Steel.

1.03 SUBMITTALS

A. Product Data: Manufacturer's catalog cuts indicating material compliance and specified options.

B. Shop drawings: Layout of fence and gates with dimensions, details, and finishes of component accessories and post foundations.

C. Samples: Color sections for polyester finishes. If requested, samples of materials for finials, caps, and accessories.

1.04 QUALITY ASSURANCE

A. Manufacturer shall have a minimum of 5 years experience

manufacturing ornamental picket fencing.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Ornamental Picket Fencing:

1. Ameristar, Tulsa, OK.
2. Monumental Iron Works, Baltimore, MD.
3. Accepted equivalent.

2.02 COMPONENTS

A. Ornamental Picket Fence:

1. Style and heights as shown on drawings.
2. Pickets:

    a. Square tubular members.
    b. Minimum Size Pickets: 1 inch.
    c. Picket Spacing: 3-15/16" maximum face to face.
    d. Thickness: 14 gauge.
    e. Attach each picket to each rail with #4 - 1/4" industrial drive rivets.

3. Rails:

    a. "U" channels formed from hot-rolled structural steel having no pockets or shelves to hold water or moisture.
    b. Size: 1-1/8" wide x 1-1/2" deep.
    c. Wall Thickness: 11 gauge.
    d. Punch rails to receive pickets and rivets and attach rails to all brackets with 2 each, 1/4" industrial drive rivets.

4. Posts:

    a. Square tubular members.
    b. Minimum Post Size: 3 inches x 3 inches.
    c. Wall Thickness: 12 gauge.

5. Accessories:

    a. Assembled panels with ornamental accessories attached using industrial drive rivets to prevent removal and vandalism.

6. Finish:

   a. Steel material, galvanized after forming shall comply with ASTM A1011 with a minimum yield strength of 50,000 psi. The exterior shall be hot dipped galvanized with a 0.45 oz/sq.ft. Minimum zinc weight. The interior surface shall be coated with a minimum 81 percent nominal zinc pigmented coating 0.3 mils minimum thickness.
   b. Steel material, galvanized before forming, shall comply with ASTM A924 with a minimum yield strength of 50,000 psi and have G90 hot dipped galvanized coating according to ASTM A653.
   c. After steel components have been galvanized, clean and prepare surfaces of components to assure complete adhesion of finish coat.
   d. Apply 2.5 mil thickness of polyester resin based powder coating by electrostatic spray process.
   e. Bake finish for 20 minutes at 450 degrees F (232 degrees C) metal temperature.

7. Gates:

   a. Ornamental picket swing gates.
   b. Ornamental picket cantilever slide gates.

B. Accessories:

1. Rail Attachment Brackets:

   a. Die cast of zinc (Zamak #3 Alloy).
   b. Ball and socket design capable of 30 degrees swivel (up/down-left/right).
   c. Bracket to fully encapsulate rail end for complete security.

2. Industrial Drive Rivets:

   a. Of sufficient length to attach items in a secure nonrattling position.
   b. Rivet with minimum of 1,100 lbs. holding power and shear strength of 1,500 lbs.

3. Ornamental Picket Fence Accessories:

   a. Provide indicated items required to complete fence system.
   b. Galvanize each ferrous metal item according to ASTM B695 and finish to match framing.

4. Post Caps:

   a. Formed steel, cast of malleable iron or aluminum alloy, weather tight closure cap.
   b. Provide post cap for each post.

5. Picket Tops: Square edged or rounded. Points are not allowed.

C. Setting Material:

1. Concrete: Minimum 28 day compressive strength of 3,000 psi.
2. Flanged Posts: Provide flange type base plates with 4 holes for surface mounting of posts where indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify areas to receive fencing are completed to final grades and elevations.

B. Ensure property lines and legal boundaries of work are clearly established.

3.02 INSTALLATION

A. Install fence according to manufacturer's instructions.

B. Space posts uniformly at 8'-0" maximum face to face unless otherwise indicated.

C. Concrete Set Posts:

1. Drill hole in firm, undisturbed or compacted soil.
2. Holes shall have diameter 4 times greater than nominal outside dimension of post, and depths of approximately 6 inches deeper than post bottom.
3. Excavate deeper as required for adequate support in soft and loose soils, and for posts with heavy lateral loads.
4. Set post bottom 36 inches below surface when in firm, undisturbed soil.
5. Place concrete around post in continuous pour.
6. Trowel finish around posts and slope direct water away from posts.

D. Gate Posts and hardware: Set keepers, stops, sleeves and

other accessories into concrete.

E. Surface mount (wall mount) posts with mounting plates where indicated. Fasten with lag bolts and shields.

F. Check each post for vertical and top alignment, and maintain in position during placement and finishing operation.

G. Align fence panels between posts. Firmly attach rail brackets to posts with 1/4 inch bolt and lock nut, ensuring panels and posts remain plumb.

3.03 GATE INSTALLATION

A. Install gates plumb, level and secure for full opening without interference.

B. Attach hardware with tamper resistant fasteners.

C. Adjust hardware for smooth operation.

3.04 ACCESSORIES

A. Install post caps and other accessories to complete fence.

B. Clean up debris and unused material and remove from site.

END OF SECTION

DESIGN STANDARDS SUPPLEMENT

January 2008

Miami-Dade County Public Schools
giving our students the world

M-DCPS Design Standards 2008 Supplement

The purpose of this Supplement is to provide Architects, Engineers, Construction Managers, Executive Directors, Project Managers, etc. a list of new requirements and clarifications of existing requirements represented in the latest version of M-DCPS Master Specification Guidelines (2004), Design Criteria (2004), and Educational Specifications. These items shall be implemented in all projects that have not yet completed phase one design. For projects in phase two or three design or in construction, each item shall be reviewed and implemented at the discretion of the appropriate M-DCPS Capital Construction Region Executive Director. Questions should be directed to the Division of Facilities Design and Standards at (305) 995-4575.

General Considerations

1. Miami-Dade County Public Schools (M-DCPS) recognizes the importance of Green/Sustainable/High Performance Building initiatives such as Collaborative for High Performance Schools (CHPS) and Leadership in Energy and Environmental Design (LEED) established by the U.S. Green Building Council (USGBC). These initiatives serve as a guide and reference for building owners, designers and builders to ensure that future buildings increasingly incorporate the “best practices” that will in time, lead to a sustainable environment for all.

   M-DCPS urges architects, engineers, design professionals, contractors and others to utilize these concepts in all M-DCPS facilities. M-DCPS expects the project team to propose Green/Sustainable/High Performance Building concepts; products, materials, equipment, construction methods, and other related factors for review and approval, even if they differ from the M-DCPS Design Standards. The Architect/Engineer (A/E) shall maintain a LEED score sheet for every project. Formal LEED certification will only be required if the A/E is commissioned for this activity on a per-project basis.

2. M-DCPS concern for recycling and other environmental matters applies to all building products and their manufacturing processes. Materials or manufacturing processes harmful to the environment should be avoided if possible. M-DCPS encourages the use of recycled materials and products. The A/E shall specify such items wherever feasible. Do not specify woods from endangered rain forests or other environmentally sensitive regions. Do not specify materials capable of releasing formaldehyde, mercury, mineral spirits, or any other toxins, irritants, or

volatile organic compounds (VOC's). Laminated plastics shall not contain toxic adhesives.

3. Products that are Energy Star qualified may be evaluated and presented to M-DCPS Division of Facilities Design and Standards for consideration and possible approval. See www.energystar.gov for description of this EPA/DOE initiative that applies to some windows, doors, roofs, appliances, water coolers, and lighting items.

4. The design of a facility shall make use of Frugal Construction Standards issued by SMART Schools Clearinghouse, except as noted in M-DCPS Design Standards.

5. To the greatest extent possible the A/E shall develop a compact building footprint and provide the largest possible open/green areas for use as play fields and for future building expansion.

6. In renovations and remodeling, consult with the school's Administrative Staff to consider retaining items having historic value.

7. The (NIC) FF&E list identifies the furniture, fixtures and equipment supplied by M-DCPS. The A/E shall develop a comprehensive layout plan that contains all In-Contract (IC) and Not In-Contract (NIC) FF&E items. This layout shall provide and be coordinated with all utility requirements serving these items. A copy of the layout, at 1/4 inch = 1 foot scale, shall be provided to M-DCPS for their review and approval no later than at Phase II Design Review. All electrical, systems, and plumbing drawings shall be checked and coordinated with the FF&E Plans during the Phase Matrix Review Meetings.

8. Deviations from M-DCPS Design Standards during design or construction require proper justification in writing to M-DCPS Facilities Design and Standards for review and possible written acceptance prior to implementation. The A/E shall submit to the M-DCPS Project Manager at each design Phase, a letter certifying that the design documents comply with M-DCPS Design Standards. Any previously approved deviation or substitution shall be identified in this letter from the A/E.

9. All requests for substitutions, "approved equals", or deviations from M-DCPS Design Standards, shall first be reviewed by the Architect of Record and the Design Criteria Professional, when applicable. All requests shall include a detailed written justification, containing benefits to the District and the cost differential. All requests shall be submitted with the appropriate form to the M-DCPS Project Manager for review and possible written approval by the M-DCPS Maintenance - Facilities Operation and the Division of Facilities Design and Standards. The response shall be

generated within 14 days of the substitution request being delivered to the Division of Facilities Design and Standards.

10. Prior to beginning design, the Architect/Engineer (A/E) shall meet with M-DCPS Division of Facilities Design and Standards to obtain all updated Master Specification Guideline sections. These sections shall replace or complement the sections from the 2004 Master Specification Guideline.

11. The Project Architect/Engineer (A/E), and not M-DCPS, prepares the Specifications for each project. The A/E is required to edit the Master Specification Guidelines, (M-DCPS Spec Guide) provided to them by M-DCPS so that it is project specific. These guidelines contain requirements mandated by M-DCPS that are not found in commercial master specification texts or in specifications used in ordinary commercial and residential construction. M-DCPS specification guidelines contain numerous requirements that are essential to the M-DCPS instructional, administrative, maintenance and custodial operations. In editing the guidelines, it is incumbent upon the A/E to retain special M-DCPS requirements. When in doubt as to how to edit, contact M-DCPS Division of Facilities Design and Standards. The A/E shall clearly understand that these specification guidelines are only a starting point; they must be edited to describe each project's scope and quality of work without deviating from the inherent intent and essential practices of the specification guidelines, the Design Criteria, the project Educational Specifications, and the law. Because the guidelines provided by M-DCPS are rarely used in the same calendar year in which they were written or updated, it is the responsibility of each A/E design professional to conform to current code, laws and standards, and to update references to the governing year as needed. The number of listed products and manufacturers may be edited to no fewer than two. The inclusion of additional products or manufacturers requires written acceptance from M-DCPS Division of Facilities Design and Standards.

12. For schools that have areas that are designated as an "Enhanced Hurricane Protection Area" EHPA, the Architect/Engineer (A/E) shall comply with all requirements of FBC 2004 and Emergency Shelter Design Criteria for Educational facilities, by the University of Florida for DOE. The A/E shall also comply with the applicable requirements and details contained in the EHPA Design Criteria prepared for M-DCPS by Spillis Candela & Partners, Inc. dated October 1998.

13. Designated EHPA areas within a facility shall have a FBC required "main fire alarm panel" located in the EHPA manager's office, (FBC 423.25.3.5). The fire alarm panel in the EHPA manager's office is in addition to the fire alarm enunciator panel located in the main administration area, which is required by the M-DCPS Design Criteria. The fire alarm panel in the

administration area shall not be eliminated for schools that are designated as an EHPA.

14. For schools that have areas that are designated as an “Enhanced Hurricane Protection Area” EHPA, the Architect/Engineer (A/E) shall develop an “EHPA User Manual”. The User Manual shall be provided to the school administration and maintenance staff in a hard copy and power-point format. The Contractor shall provide training to M-DCPS Maintenance and School Administration Staff, on the proper use of all EHPA related systems. The training sessions shall be filmed and developed into a training video in digital format as part of the closeout documents. The manual and video shall describe and illustrate the available systems, valves, equipment, etc., their location, how to use them, as well as all of the maintenance requirements. The User Manual and the training video shall be kept in the designated office within the EHPA. A copy of the manual and video shall also be provided to M-DCPS Emergency Management and the appropriate Region Maintenance Center (RMaC) as part of the closeout documents.

15. For schools that are designated as an EHPA, the Architect/Engineer (A/E) shall specify that all switches, buttons and valves associated with the available systems shall be permanently labeled and documented in the “EHPA User Manual”.

16. For schools that are designated as a EHPA, the Architect/Engineer (A/E) shall specify that the contractor shall supply all of the required wrenches, hooks and tools to properly operate all of the available EHPA systems. All of the tools needed to operate the EHPA shall be accepted by the M-DCPS Project Manager and provided in a lockable cabinet that is kept in a secure location within the dedicated EHPA office.

17. Designated EHPA areas within a facility shall be identified on the F.I.S.H. drawings. The A/E shall outline the spaces within all buildings that are designated as EHPA areas for the required submittal to the M-DCPS FISH Department.

18. Exterior and interior stairs shall be cast-in-place sealed concrete with recessed full-length metal anti-slip nosing at least 3 in. wide, anchored the full-width of each tread and landing. The nosing shall be installed aligned with the finished edge of the concrete thread.

19. The requirements for concrete risers for Band and Vocal classrooms have been eliminated by M-DCPS. The electric and data outlets shall be properly located and provided as flush floor outlets.

20. For new schools and major additions an In-Contract (IC) Marquee sign shall be provided at the appropriate location. Underground electric and data conduit shall be installed for the IC school Marquee Sign. The data line for the sign shall terminate at a Telecommunication Closet so that it can be programmed from a secretary station in the Administration Office.

21. Provide a compact facility footprint and design to accommodate future expansion by building addition or by portable classrooms, according to program requirements and Division 13.

    A. A specific area or areas next to the building shall be designated on the site plan for future buildings or portable classrooms. Keep this area clear of underground utilities, easements, circulation paths, and other encroachments.
    B. Areas identified for future expansion shall incorporate a design solution with accessibility, security, utility servicing, and control/monitoring of these areas available from the permanent facility.
    C. Provide utility stub outs for future expansion according to program requirements and Division 13, 15 and 16.

22. Classroom acoustics shall meet ANSI Standard S12.60-2002.

23. A maximum Reverberation Time (RT) of 2.0 seconds is now required for Gymnasiums. Reverberation time is measured in seconds (500/1000 Hz) per national average requirement in mid-range frequencies. A qualified acoustics professional, accepted by M-DCPS, shall design the acoustic treatment for the Gymnasiums according to all acoustical requirements.

24. Provide a 4’ x 8’ or 8’ x 8’ construction sign at all new schools and additions prior to the start of construction. Obtain the size requirements, sample layout and additional requirements from the M-DCPS Project Manager.

25. Low speed gunpowder-activated fasteners may be used for limited-uses on M-DCPS Construction Projects. They shall not be used as the main support for construction elements located over-head. They may be used to fastened electrical conduits up-to 1-1/4” in diameter and miscellaneous electrical fixtures and electrical panels. For any other usage, approval must be obtained from M-DCPS Facilities Design and Standards on a per project basis. In Remodeling Projects gun-powder-activated fasteners shall not be used when the public, staff and students are in the immediate area of construction.

Division 1 – General Requirements

1. Shop drawings for playground equipment shall be submitted to the M-DCPS Division of Safety and Emergency Management for their review and possible approval.

Division 2 – Site Work

1. Safety surfaces at primary play areas and all playground equipment areas shall be poured-in-place granulated, reclaimed rubber surface with a geotextile sheet beneath. Synthetic grass surface over geotextile and a poured-in-place granulated rubber bed are presently being evaluated and may also be considered in these areas. The A/E shall submit product type and the product specifications for review and possible approval by M-DCPS Division of Facilities Design and Standards. Do not use sand for the primary play area or the playground equipment area.

2. Racquetball courts are no longer required for new facilities.

3. The use of xeriscaping for all landscaped areas other then sodded play-fields is now a mandatory requirement. The A/E is encouraged to develop a design that utilizes native plant-life whenever possible. Consult the M-DCPS Design Criteria (2004) for additional information about xeriscaping.

4. The following are the new requirements for the installation of sod for school facilities. Prior to beginning the landscape design the A/E shall meet with M-DCPS Division of Facilities Design and Standards to obtain the appropriate updated Master Specification Guideline sections.

    A. Solid rolled sod with certified Bermuda Tifway 419, Bermuda "Celebration" shall be provided for the all purpose PE field, football field, soccer field, softball outfields, baseball infields and outfields for all Senior High Schools. It shall also be specified for other athletic specialty areas such as track and field and the areas in between the athletic fields so that it is continuous within the athletic field footprint. The fields shall be designed so that there are physical barriers between the Bermuda Tifway sod and other types of sod and landscaping so there is no migration into these areas.
    B. Solid sodding of St. Augustine Floratam shall be provided for Senior High Schools at all non-Physical Education/Athletic fields. It shall be specified for all Elementary, ECC, K-8 and Middle School playfield areas. It also shall be specified for general irrigated landscape areas adjacent to buildings and parking lots for all schools.
    C. Solid sodding of Bahia shall be provided at areas not considered part of the site-landscaped areas. It shall be specified for right-of-ways and anywhere that site maintenance is a major concern.

5. Royal palms and other palm trees that produce large falling fronds shall not be used in designated sitting and other student gathering areas.

6. The use of reclaimed water for irrigation purposes shall be evaluated by the designer and presented to M-DCPS Division of Facilities Design and Standards for consideration.

7. The A/E shall design the irrigation systems to have an automated central control station reporting to M-DCPS Facilities Operations – Landscape Maintenance. Communications between M-DCPS Landscape Maintenance and the control station shall occur on the IP Intra-network.

8. The A/E shall submit to the Landscape Maintenance staff, (305) 995-7849, the Landscape and Irrigation System construction documents for review and approval. The A/E shall incorporate all of the comments from the Landscape Maintenance staff into the Construction Documents prior to bidding the project.

9. The irrigation contractor shall request an inspection from M-DCPS Facilities Maintenance Operation staff, (305) 995-7849, before the system has been completed. The A/E shall request a Punch List Inspection from the Landscape Maintenance staff when the project has achieved Substantial Completion. The final operational tests for the irrigation equipment and all irrigation zones shall be performed by the contractor and witnessed by the A/E and the M-DCPS Landscape Maintenance staff.

10. When providing irrigation for any playfield or athletic field area at an existing facility the designer shall investigate with MDCPS Facilities Maintenance Operations to determine if an existing usable pump station is on site. This will avoid duplication of wells and pump stations. If there is no usable pump station, then utilize one of the specified pump stations from Hoover or approved equal for the area. The size of the pump station will be determined by the size of the area to be irrigated.

11. The A/E shall place fencing around the school site to utilize portions of the buildings as the perimeter barrier to minimize the fencing around the property. The A/E shall avoid situations where there is a double fence for athletic fields and the perimeter fence within a few feet of the property line.

Division 3 – Concrete

1. The use of stained or sealed concrete for interior circulation spaces shall be evaluated and presented to M-DCPS Division of Facilities Design and Standards for consideration and possible approval on a per project basis.

2. Concrete sidewalks, courtyards, exterior walkways and exterior dining areas shall always have a broom finish and be clear-sealed. Concrete that is not sealed is unacceptable for M-DCPS projects.

Division 4 – Masonry

Division 5 – Metals

1. Equipment supports for rooftop mechanical and electrical equipment shall require that the height, member sizing, and layout of each supporting structure be designed by the equipment producer, using a registered Florida professional engineer to calculate loads, including overturning moment of support and superimposed equipment following ASCE 7. Equipment producers will refer to the Master Specification Guidelines for basic steel, corrosion protection and fabrication requirements.

2. All handrails, posts and brackets for interior and exterior steps and stairs shall be aluminum with an integral satin clear anodized finish, (AA Architectural Class I, 0.7 mil or greater). Aluminum handrails shall not be painted or organic coated under any circumstances. All exterior handrails shall be attached to the building utilizing vandal resistant screws.

Division 6 – Wood and Plastics

1. The A/E shall design the “Classroom Service Center” base cabinets for the Primary Classrooms, Kindergarten Classrooms and Pre-Kindergarten Classrooms so that the counter top height is 2’-2” AFF. The “Classroom Service Center” base cabinets for the Intermediate Classrooms shall have a counter top height that is 2’-6” AFF. Consult the individual Educational Specification for additional information for the “Classroom Service Centers”.

Division 7 – Thermal and Moisture Protection

The new Design Criteria and Master Specification Guidelines will document radical changes in roof design and construction. The following paragraphs summarize many of these new requirements.

1. Scope of Roof Assembly - The A/E shall specify that the roof assembly is the responsibility of the roof membrane producer and the roof installer under a 20-year special warranty. The roof assembly is everything above the structural roof deck including the downspouts and rain-leaders.

2. All wood shall be eliminated from the roof assembly. Instead of wood all blocking shall be made of galvanized steel of constant thickness throughout. The galvanized steel blocking allows for torch application of the roofing instead of hot mopping. This will eliminate messy kettles, bitumen at temperatures that are too low and asphalt spills on new masonry and tilt-up walls.

3. Prior to issuance for bidding or negotiation, the roofing specifications and details shall be reviewed by the M-DCPS Division of Roofing for approval. All of the required submittals shall also be reviewed and approved by the Division of Roofing prior to acceptance by the A/E.

4. The insulation shall be lightweight insulating concrete. The lightweight concrete shall be made from cellular or lightweight aggregate over styrene board, held where possible to a uniform thickness that will give an R-value of at least 19.0. Isocyanurate or other board insulation assemblies will not be allowed. The insulation must slope at least ¼ in/ft to scuppers, with crickets at every impediment. The placement of the insulation must assure that there will be no ponding before the roofing installation proceeds. The approved lightweight insulating concrete manufacturers are:

    A. Concrecel International (Concrecel)
    B. Elastizell (Cellular and Hybrid)
    C. Cellcore
    D. Cellular Concrete (Mearlcrete)
    E. Siplast (Insulcel, NVS, and Zonocel)

5. The perimeter of the lightweight insulating concrete on styrene roof insulation will be encapsulated in 16-gage galvanized steel, securely bolted to the structural deck against uplift.

6. The roofing membrane shall consist at a minimum of a base sheet and 2-ply, styrene butadiene styrene (SBS) modified bitumen roofing. Torched application will be used wherever possible for the SBS modified bitumen roofing for roof membrane and base flashings. Localized hot mopping will only be permitted with written approval from the MDCPS Division of Roofing. The full-modified bitumen surfacing of roof-level walls and the wrapping of parapet wall tops are mandatory. The manufacturer shall oversee the coordination, installation, corrections, perform periodic inspections and maintain and repair the entire roof assembly to give MDCPS a functioning roof assembly for 20 years. The current approved roofing manufacturers are:

    A. Firestone
    B. Siplast

C. Soprema

7. Energy Star roofing that complies with M-DCPS Master Specifications Guidelines and Design Criteria shall be evaluated by the A/E and presented to M-DCPS Division of Facilities Design and Standards for consideration and possible approval.

8. The installed roof system shall have a minimum slope of ¼-inch per foot. No ponding water is allowed on any roof system.

9. Expansion joints will be properly flashed 16 gage assemblies that extend at least 16 inches above the roof level. Galvanized steel 16-gage cant strips will be used instead of wood or fiberglass. Where blocking and other roof steel is visible, it shall be covered with 28 gage stainless steel fascias, copings and other trim fabricated in the same shop that fabricates the base metal for a good fit.

10. Pitch pans and chem-curbs are not permitted. Stainless Steel Flashing for Vent Stacks, extensions, and caps by SBC Industries, North Miami, FL or approved equal shall be used for all penetration flashings.

11. All roof penetrations shall extend a minimum of 14 inches (18 inches minimum for mechanical supports) above the finished roof surface, even at crickets.

12. Scupper, gutters and downspouts shall be made of stainless steel. Copper flashing shall be used at roof drain flanges and no lead will be permitted anywhere. Fasteners must be removable for ease of maintenance.

13. All base-flashing shall consist, at a minimum, of a 2-ply polyester reinforced styrene butadiene styrene (SBS) system compatible with the field membrane being used.

14. Wrap and cap all parapet walls with a 2-ply, torch grade, polyester reinforced, styrene butadiene styrene (SBS) modified system compatible with the field membrane being used. The parapet wall shall be primed prior to installation of the wall flashing.

15. Picture frame the inside and outside of all working and overflow scuppers. Install sealant throughout prior to installing the collector head. At tilt-up wall construction, no roof scupper shall be placed at a tilt-wall panel joint.

16. Gutters shall have rollover straps installed at 30-inches on center. Joints shall be soldered. Liquid gutter seal is not allowed.

17. Wood nailers are not allowed in the roof assembly at perimeter edge, expansion joints, coping, curbs, cants, etc. Use Alternative Roof Blocking (ARBS), 16-gauge galvanized metal or approved equal.

18. Tilt-up walls along low to high roof transition shall not have the decorative reveal. The tilt-wall panel joints shall be covered with a stainless steel metal plate.

19. All fasteners used shall be removable – exposed fasteners shall have grommetted washers.

20. Traffic pads shall be installed at all ladder landings, all sides of all equipment, three sides of all roof hatches and any other item that may require maintenance.

21. Ensure equipment (pipes, curbs, stands, roof jacks, lightning protection penetrations, hatches) maintain a minimum 24-inch distance from walls and other penetrations.

22. Roof assembly edge guards shall be provided at rooftop equipment that is closer than 10 feet from the edge of the roof. Whenever possible the roof top equipment should be placed more than 10 feet from the edge of the roof to avoid the edge guards. The edge guards must be engineered by the A/E of record firmly anchored to the structural and flashed. The edge guards should be anchored to the structure at the building fascia in lieu of anchoring through the roof membrane whenever possible.

23. Penetrations through the roof shall be kept at a minimum wherever possible. Lightning protection penetrations shall be placed in the wall through the parapet flashing and not in the field of the roof.

24. Equipment curbs shall be prefabricated and installed on the structural deck so as to meet the minimum height above the finished roof surface required by the Florida Building Code (FBC) and M-DCPS Division of Roofing requirements.

25. Use of lead flashing is not allowed anywhere in the roof system assembly. At the drains, use 16 ounce, 30-inch by 30-inch, malleable copper flashing. At penetrations, use stainless steel SBC flashing or equal.

26. Roof hatches shall be installed so the lift handle is located on the ladder side of the hatch.

27. All curbs shall have a ½-inch per foot cricket on the upside slope of the curb.

28. Provide downspouts for rainwater disposal from the roof. Provide gutters and downspouts at the edge of the roof perimeter. Built-in gutters behind parapets and parapet top gutters are not allowed. Interior drains are not permitted unless approved by M-DCPS Division of Facilities Design and Standards on a per project basis.

29. For multistory buildings downspouts shall be stainless steel from the roof down to 9 feet above grade. The stainless steel downspouts shall enter into schedule 80 PVC downspouts 9 feet above grade. The downspout shall be connected to an underground drainage system sized to meet the rainwater requirements from all of the roof decks. Clean-out provisions shall be provided at the location where the downspout is connected to the underground drainage system. Offset the downspout a minimum of 12-inches from any vertical joint which may require maintenance. The downspouts are to be held to the building by bolted stainless steel straps at 4'-0" on center. The downspouts shall receive an elastomeric coating that matches the wall color of the building. The downspout is only permitted to discharge onto the ground surface at existing facilities that have no existing underground drainage system. If there is no underground system the downspout shall have a 45-degree angle at the bottom and it shall discharge to a poured in-place concrete pad. Should it discharge to another roof surface, it shall discharge to a pre-cast splash block set on a traffic pad or salvage sheet. Do not use ductile iron for the downspouts.

30. Fixed external transfer ladders are allowed between roof decks only when approved on a per condition basis by M-DCPS Division of Facilities Design and Standards. They shall not be anchored to the roof deck nor shall they rest on the roof surface. The lowest ladder anchor shall be at least 18 inches above the roof surface. The transfer ladders shall extend down both sides of the parapet that separates the two roofs whether the roofs are at different levels or the same. The ladder shall terminate 1 foot above the roof surface. At the roof surface below the termination of each ladder, a walkway pad shall be provided that is large enough for setting down tools and allow the user to get on or off the ladder. The transfer ladder shall have a platform at the point of transfer over the top of the parapet large enough to set down tools and allow the user to pass over unencumbered to the opposite side.

Division 8 – Doors and Windows

1. Vision panels shall be provided in classroom doors only when required by code or special programs as identified by M-DCPS. Do not provide vision panels in classroom doors if they are not required.

2. Doorframes for masonry, concrete and tilt-wall construction shall be bolted and grout filled in-place. This applies to all doorframes except those at metal stud partitions. Doorframes at metal stud partitions shall be grout filled but are not required to be filled in place. Double metal studs shall be installed around the opening for all drywall partitions to secure the door.

3. Exterior door transoms and sidelights are now allowed for all projects. The transoms and sidelights shall be impact-resistant glass units that meet all of the requirements for impact-resistant windows. When exterior door transoms and sidelights are utilized, the A/E shall submit the proposed manufacturer/window type, with specifications, for review and possible approval by M-DCPS Division of Facilities Design and Standards.

4. All doors to occupied spaces that swing into a circulation corridor shall be recessed the full width of the door panel. There shall be no exceptions to this requirement.

5. Provide surface mounted exit devices at locations as defined in the M-DCPS Design Criteria.

6. Provide Cylinder Dogging (CD) on non-fire rated exit devices. Cylinder dogging uses a regular key cylinder keyed to the school master key system instead of the common hex dogging key.

7. Heavy-duty aluminum storefront and entrances are now allowed for all M-DCPS projects. The locations for the aluminum storefront and entrances must be approved by M-DCPS Division of Facilities Design and Standards on a per situation basis. The following are mandatory requirements for lites and doors up to 3x9 feet, 4x7 feet or 25-30 SF with frames no less than 4-1/2 inch deep:

    A. The aluminum thickness for framing members shall be no less then 0.125 inch.
    B. The aluminum finish shall be AAMA 2605 PVDF coating, not powdercoat or anodized.
    C. The entrance doors shall swing out with a gasketed threshold, not a saddle.
    D. Storefront and entrance assembly with current Miami-Dade BCCO NOA shall be used.
    E. The storefront and entrance assembly shall have wind pressure resistance at least 100 PSF ± both negative and positive pressure.
    F. The storefront and entrance assembly shall have large and small missile impact rating.
    G. The entrance doors shall have an air intrusion less than 0.8 cf/min/ft^2 @ 6.24 PSF.

H. The storefront and entrance doors shall have no water intrusion at 15.0 PSF as per ASTM E331.
I. All entrance doors must pass AAMA 1302.5 forced entry test as well as the Miami-Dade test.
J. The entrance door hardware shall be selected from sources acceptable to MDCPS Lock Division, with 3-point door locking, closers with proven long service life, and solid brass or stainless steel hinges.
K. Impact-resistant glazing shall be used equal to or of higher quality than the quality specified for impact-resistant windows in the project.

8. Impact-resistant glazed window units are now permitted for all projects. Metal louvered windows may still be specified for schools when appropriate. The use of either window type needs to be studied by the A/E and approved by M-DCPS Division of Facilities Design and Standards on a per situation basis. The A/E shall submit the proposed impact-resistant window unit manufacturer and window type, with specifications, for review and possible approval by M-DCPS Division of Facilities Design and Standards. The A/E should strive to design window units that are standard architectural sizes for ease of replacement whenever possible. The A/E should minimize the use of decorative, unusually shaped, fixed units such as octagon shaped and porthole windows. The following are mandatory requirements for the impact-resistant glazed window units:

A. The impact-resistant windows shall be aluminum with a minimum ¾ inch wide aluminum flange that runs around 100% of the perimeter. It is mandatory that the unit shall be set in a full bed of sealant against the ¾"lip in the concrete or masonry opening, (See the window sill detail contained in the M-DCPS Design Criteria Appendix).
B. The aluminum finish shall be AAMA 2605 PVDF coating, not powdercoat or anodized finished.
C. The window unit shall be glazed and assembled in a factory; not built on site. All fastening holes shall be shop-drilled to follow the NOA; not measured in the field.
D. Impact-resistant windows with current Miami-Dade BCCO NOA shall be used.
E. The window unit shall have wind pressure resistance at least 100 PSF ± both negative and positive pressure.
F. Impact-resistant windows shall have large and small missile impact rating.
G. Impact-resistant windows shall have an air intrusion less than 0.8 cf/min/ft^2 @ 6.24 PSF.
H. Impact-resistant windows must pass AAMA 1302.5 forced entry test as well as the Miami-Dade test.

I. Outward projecting window types cannot swing out into any circulation path. Inward projecting hopper units are not to be used.

9. When non-louvered windows are used, commercial grade roller shades shall be provided for all units. The shades shall be vinyl-coated fiberglass reinforced, room darkening shade with clutch. The A/E shall submit product type and the specification for review and possible approval by M-DCPS Facilities Design and Standards.

10. A "Window Field Leak Test" shall be conducted at no cost to M-DCPS, by the Contractor and window installer with the A/E and the M-DCPS Project Manager present. The "Window Field Leak Test" sequence that shall be conducted as follows:

A. The test shall be performed after the first factory-glazed operable window assembly has been installed at the site. The window assembly shall follow all of the requirements in the Contract Documents. After the assembly has been approved and met all of the requirements for the "Window Field Leak Test", it shall be used as the "standard" window mock-up".
B. The goal is to determine, as early as possible, if the installation is being done correctly and to let the installer apply what is learned to succeeding window installations. The test will identify leaking within the window and leaking between the window and the surrounding construction. An outside consultant or an M-DCPS Test Lab is not required to conduct the test. The contractor and the installer shall conduct the Window Field Leak Test. The A/E and M-DCPS Project Manager will witness and report the test results. A hose and a nozzle shall be utilized to conduct the test.
C. The contractor shall conduct the test and as many re-tests of the initial window assembly as needed, until a leak-free installation is attained. After the 2nd failed test, the contractor may be back-charged for all tests, at the discretion of M-DCPS Project Manager.
D. At the start of the test the glazed window assembly shall have been shimmed and fastened in the opening over blocking bedded in sealant as required by the window specifications. The flange at the perimeter of the window frame shall be set in a full bed of sealant. All interior finishes, such as the gypsum board and window stool, shall not yet have been installed against the window frame so that all water intrusions can be identified
E. A representative from the Contractor, window installer, window producer, M-DCPS Project Manager, and the A/E shall be present during the testing. The Contractor or window installer shall operate the hose nozzle for the testing.
F. The test will be performed in two 5-minute phases with a brief conference between phases. A 5/8-inch garden hose and straight,

adjustable brass nozzle shall be used for the test. Set the nozzle to produce an 8 in. to 10 in. diameter pattern at an 8 ft to 10 ft distance from the window. Ascertain and note the water pressure where water from a public source enters the hose, preferably 45 PSI to 55 PSI. If a permanent water source is not available at the time that the test needs to be conducted the contractor shall supply equipment to achieve the required 45 PSI to 55 PSI. The contractor shall spray water against the window while the M-DCPS PM instructs the nozzle holder. The A/E shall observe and note any leaks or other signs of water intrusion at the interior side of the window. Other parties may observe the testing.

- For two minutes, spray the perimeter of the window opening, moving slowly, for 2 circuits, directing slightly more than half of the hose stream just within the window perimeter.
- For one minute, spray the joints within the window opening, moving slowly along the vent joints, and the mullion or muntin joints.
- For one minute make another circuit around the perimeter and along all joints.
- Shut off the nozzle while the MDCPS PM and the A/E confer in presence of other parties to review what the test has revealed. If the test is inconclusive it shall be repeated.

G. The test shall be adjusted to meet the actual window size. The test procedure above is designed for window assemblies/units that are 24 ft^2 to 40 ft^2. When the window is less than 24 ft^2, reduce the 2 minutes to 1-1/2 minutes, and 1 minute to 45 seconds. If the window is 40 ft^2 to 70 ft^2, expand 2 minutes to 3 minutes, and 1 minute to 1-1/2 minutes. If the window is 70 ft^2 to 120 ft^2, expand the time to 3-1/2 minutes, and 1-3/4 minutes.

H. If the mock-up window unit allows any water penetration the contractor shall remove the unit completely and re-install the entire window assembly again at no cost to M-DCPS. The Window Field Leak Test shall be repeated as many times as required to produce a water intrusion free result as determined by all parties.

I. The mock-up must prevent any and all water intrusion before the installation of the remaining windows is permitted to continue. The “Window Field Leak Test” shall continue when all of the window installations have been completed for a building elevation or section of a building. The A/E shall select 10% of the total window area from each building section or elevation to conduct the Window Field Leak Test. The 10% selected shall represent window assembles from all of the floors and locations within the test zone. All of the procedures detailed above shall be followed when testing each window assembly selected by the A/E.

Division 9 – Finishes

1. Utilize carpet tiles such as Interface “Academic” or approved equal in lieu of broadloom carpet in spaces where carpet is required. The A/E shall submit product type and the specification for review and possible approval by M-DCPS Division of Facilities Design and Standards.

2. When existing carpeting is being replaced the installer shall send all of the old carpeting materials to a recycling plant. Do not send the old carpet to a landfill.

3. Linoleum tile and linoleum sheet flooring are acceptable in lieu of vinyl composite tile in spaces where VCT is required. The A/E shall submit product type and the specification for review and possible approval by M-DCPS Division of Facilities Design and Standards.

4. Quartz tile flooring such as Rikett quart tile by Knight Premium or approved equal is acceptable in lieu of vinyl composite tile in spaces where VCT is required. The A/E shall submit product type and the specification for review and possible approval by M-DCPS Division of Facilities Design and Standards.

5. In all group toilet rooms and Cafeteria kitchens, ceramic wall tile shall extend from the floor to the finished ceiling.

6. Provide all interior student corridors with a porcelain tile wainscot from the floor to a minimum height of 4’-4” AFF

7. Paperless gypsum board with glass fiber or other inorganic, mold-resistant facings shall be specified. Do not use paper-faced gypsum board.

8. Provide a 5/8” impact/abuse-resistant, mold/moisture-resistant gypsum board in all student-occupied spaces and student occupied interior corridors. Non-impact/resistant gypsum board may be used for interior partitions in non-student occupied spaces. These areas include the administration area, student services area, teachers lounge, and the media center.

9. It is acceptable to utilize metal stud partitions with 5/8” impact/abuse-resistant, mold/moisture-resistant gypsum board for communications and electrical rooms. Concrete masonry unit (CMU) or tilt-wall partitions shall be used for all mechanical rooms since they contain noise producing equipment and water and moisture is present.

10. Prefabricated metal or plastic stucco reveals are not allowed. Strike only the final stucco coat to achieve score patterns. Do not strike through the first stucco coat. Horizontal reveals should be minimized. Slope the bottom edge of horizontal score lines at least 5% to shed water.

11. The use of an exposed-structure as a ceiling for instructional areas is not allowed without prior written approval from M-DCPS Division of Facilities Design and Standards.

12. The use of low VOC paint shall be evaluated and considered for all interior spaces. The product specifications shall be submitted to the M-DCPS Paint Department for review and approval at Maintenance Operations - Paint Department, 12525 NW 28th Avenue, Miami, FL 33167.

Division 10 – Specialties

1. The A/E shall specify the mounting heights (above finish floor) for all instructional boards, so that the writing surface, not the bottom of the frame, meets the following requirements:

    A. 2'-4" at pre-K through 3rd grade
    B. 2'-6" at 4th grade and 5th grade
    C. 2'-9" at middle school and high school
    D. 3'-0" at staff areas

2. For Postal Service (USPS) deliveries, provide a drop box for all new facilities with an embedded base anchorage and with components, installation, and location complying with USPS requirements. The drop box shall be purchased from "Postal Products Unlimited", (Division of American Postal Manufacturing, Inc.), "Relay Collection Box with pedestal – Model N1014184". The USPS does not accept any other drop box so there shall not be any substitutions allowed. The mailbox shall not have any slots. The access to the mailbox shall be gained through key operation only. Two types of lock hardware shall be required:

    A. Arrow lock hardware for Post Office use.
    B. Other lock hardware for use by the school administration.

Division 11 – Equipment

All of the requirements listed below in Division 11 are associated with the Cafeteria Kitchen and the supporting spaces for the kitchen. Many of the requirements are not actually equipment but are included in this division for the purpose of grouping related items.

1. In the Cafeteria Laundry Room, provide one (1) in-contract (IC) residential washing machine and electric clothes dryer (or stacked washing/dryer unit) in accordance with the Educational Specifications. Under the washer and dryer, provide a raised concrete housekeeping pad with the same floor finish, (including the sides) as the laundry room.

2. In the Cafeteria Laundry Room provide fully assembled multi-tier lockers with six compartments with catch door pull/pad locks. Each single unit to be approximately 12”W x 18”D x 78”H. Verify with the project’s Educational Specifications for exact quantity of lockers required.

3. The walk-in cooler and freezer shall have an interior and exterior 0.040-inch aluminum skin, embossed to a stucco-like profile and finished with enamel on the finish side. Heat strips shall be furnished around the cooler and freezer doors. The cooler and freezer doors shall be provided with view windows and 30-inch high diamond-pattern aluminum kick-plate from side to side on both sides. An air-curtain shall be furnished at the cooler door. The cooler and freezer shall have a quarry tile floor installed on site, flush with the kitchen quarry tile flooring. The concrete slab shall be recessed to accomplish the flush quarry tile installation. The cooler and freezer shall have a heavy sheet of aluminum above the flooring insulation, appropriately recessed to receive the quarry tile.

4. Provide at all Point of Sale (POS) cash register locations the required electrical and data outlets (network drops). At all interior serving bays, the POS data and electrical outlets shall be supplied from the floor and must be “stubbed-up” at least one foot above the finished floor. Locate these data and electrical outlets underneath each cashier station so that students or employees cannot trip or kick them.

5. The Food Service Manager’s office shall have a minimum of two network drops for a computer and printer in addition to the fax and phone lines. The network drops should be wired to the nearest telecommunications closet.

6. The A/E shall coordinate with M-DCPS ITS personnel, the design layout for all data conduits and boxes located within the food service area. Note that all data conduits and outlets are in-contract (IC) and all data wiring will be installed by M-DCPS. As a general guideline use the following specifications for data:

    A. If the distance from the POS location to the Food Service Manager’s office is 250 feet or less, the POS shall be wired directly to the Food Service Manager’s office.

B. If the distance from the POS location to the Food Service Manager's office is greater than 250 feet, the POS shall be wired to the nearest Telecommunications closet.

7. Provide a telephone bell in the Cafeteria Kitchen outside the Food Service Manager's office that is loud enough to be heard during the production and service periods.

8. Provide the Food Service Manager's office one (1) pass-through sliding glass window 3'-0" wide x 3'-0" high 3'-6" AFF. The window shall open directly into the Dining area and shall be lockable from inside the office.

9. The AC remote control shall be provided to the Food Service Manager for the independent, after-hours A/C unit for the Kitchen Dry Storage Room.

10. Where Cafeteria Kitchen projects specify roll-thru heated and refrigerated equipment behind the serving area, the designer shall allow for adequate space to open the doors and remove pans without impeding the circulation and creating a potential safety hazard.

11. A doorbell shall be provided adjacent to the exterior door into the Kitchen Receiving area that is loud enough to be heard during the production and service periods. The exterior door at the Receiving area shall also be provided with a peephole, door sweep and weather strip.

12. The in-contract (IC) icemaker shall be equipped with a water filter. The ice maker production capacities for the Cafeteria Kitchens are as follow:

    A. PLC/ECC - 200 lbs
    B. MLC - 400 lbs
    C. Elementary - 500 lbs
    D. Middle, K-8 and Senior - 750 lbs

13. The Cafeteria Kitchen designer shall replace the fryer units from the 2004 Design Criteria with moisture plus double stack ovens.

14. In addition to a utensil rack, the Cafeteria Kitchen designer shall provide an "under" and "over" shelf on all stainless steel worktables that contain a sink.

15. Channel mount the utensil/pot rack to the two-compartment and three-compartment sinks in lieu of wall mounting the rack. The utensil/pot rack shall be installed at a height that is practical for the average 5'-5" food service employee.

16. The Cafeteria Kitchen designer shall specify that the contractor is to keep all stainless steel equipment tables, sink tables and serving lines completely covered and protected to avoid scratches from tools and machinery during construction. The contractor shall buff out any scratches prior to Substantial Completion.

17. The Cafeteria Kitchen designer shall specify foot pedal operated hand sinks in lieu of electric or battery operated hand sinks.

18. The Cafeteria Kitchen designer shall specify paper towel and soap dispensers at all hand sinks.

19. The Cafeteria Kitchen designer shall specify that all paint, plaster and stains are to be removed from the quarry tile floors and baseboard in the food service areas prior to Substantial Completion.

20. The Cafeteria Kitchen designer shall specify that the floor area under the serving lines and roll-thru heated/refrigerated units shall be level.

21. The Cafeteria Kitchen designer shall specify that floor drains be placed so that water does not pond in any area. The designer shall require that a “flood test” be performed to assure that there is no ponding. All stub-ups and floor drains must be placed and installed so that they are not a trip hazard.

22. Proper curbing shall be specified around all stub ups and floor mounted electric and data boxes in the food service areas.

23. The Cafeteria Kitchen designer shall specify that the contractor is to provide all of the keys for the drawers and all the equipment manuals for the Food Service Manager when the project achieves Substantial Completion.

24. The Cafeteria Kitchen designer shall specify that the serving lines will contain heated sections under the hot wells and refrigerated sections under the frost top and cold pans. A dome cover with integral handle shall be installed for each hot well section.

25. The kitchen hood shall be designed so that the fresh air in-take does not blow directly onto the user when they are standing in front of the hood.

Division 12 – Furnishings

1. Provide four (4) permanently mounted 20’-0” long, 5-row aluminum bleachers at an appropriate location along the outside perimeter of the

track/football field. Provide a concrete pad for each bleacher and continuous sidewalks for ADA accessibility.

2. Auditorium seating shall have cast iron, aluminum, or 14 gauge steel stanchions. Seat shall have steel pan with dual hinge system. Tablet arms are only required in every other seat in the first five rows. A 5-year manufacturers warranty shall be provided.

3. Code required aisle lighting shall be provided in a cost-effective manner. The light source must be located at the aisle not in the ceiling. Strip lighting recessed into the concrete slab is not permitted.

Division 13 – Special Construction

1. Interactive whiteboards and ceiling mounted digital projectors will be provided in all instructional spaces. The A/E shall provide the necessary communications conduits and electrical outlets to support the installation of these not-in-contract (NIC) items. Prior to beginning design, the Architect/Engineer (A/E) shall meet with the M-DCPS Division of Facilities Design and Standards to obtain all of the current requirements for this installation.

2. When an interactive whiteboard and ceiling mounted projector is provided in an instructional space, the TV together with its supporting bracket and the electrical outlet serving this device shall be eliminated. The cable outlet shall remain, but it shall be relocated adjacent to the Instructor's Technology Center

3. In large Cafetoriums provide necessary power and data conduits to support the installation of two in-contract (IC) electric screens and two not-in-contract (NIC) ceiling mounted digital projectors. Confirm this requirement with M-DCPS Division Facilities Design and Standards on a per project basis.

4. The Antenna tower shall be of sufficient height to provide line of sight signals from the M-DCPS transmitter. Antenna requirements (height, type, location, design, etc.) shall be reviewed for acceptance by M-DCPS Media Programming - Field Engineering Office (786) 275-0808. The use of a metal monopole antenna tower may be used. In no case shall the height of the tower be less than 125' above grade.

The next group of items for Division 13 are requirements developed by M-DCPS Information Technology Services (ITS). The A/E shall comply with all of the new Design Standards for ITS. Prior to beginning the design the A/E shall meet with M-DCPS Division of Facilities Design and Standards to obtain the appropriate updated Master Specification Guideline sections.

5. The Main Communication Closet (MCC), which was previously labeled the Main Telephone/Communications Room, and all Satellite Wiring Closets shall be air-conditioned spaces. The MCC shall be provided with a supplemental HVAC system for regulating temperature and relative humidity requirements for after-hour use. The A/E shall consult the M-DCPS Design Standards for additional requirements for the communication closets.

6. The flooring for all Main Communications Closet (MCC) and Satellite Wiring Closets shall be finished prior to the installation of any equipment so that they are ready to receive all of the communications equipment. The floor shall be finished with pigmented concrete sealer or pigmented concrete stain. The floors for these rooms shall not be left as an unsealed concrete slab.

7. The Main Communications Closet (MCC) and Satellite Wiring Closets shall have clear unobstructed ceilings. Ductwork, piping, etc. for other rooms is not permitted to run through the closets.

8. An additional dedicated ground bar for the telephone system shall be provided in the MCC.

9. In addition to the dedicated 120V outlets for the voice/data systems in the MCC, two separate dedicated 240V 30 Amp circuits with L6-30 outlets (lockable) shall be provided. The exact location within the MCC shall be determined by M-DCPS Information Technology Services (ITS). Contact the ITS Department at (305) 995-3332 for additional information.

10. The conduits provided for AT&T/Bellsouth in the MCC shall be installed in the lower left corner of the wall selected by the A/E. The conduits shall terminate at the property line at a location that is agreed to by AT&T and A/E. The conduits shall end in a 24” x 36” x 30” traffic rated hand hole. The location and installation shall be coordinated with AT&T/Bellsouth.

11. All communication conduits shall be provided with properly identified pull-strings that are of adequate length.

12. Ground conductors shall utilize their own dedicated conduits and not share any of the telecommunication conduits, cable trays or raceways.

13. The A/E shall clearly identify the location of the dialer for all fire alarm, security and card access panels on the construction drawings.

14. The A/E shall provide a ¾” conduit homerun back to the nearest communication closet for each floor mounted data outlet. It is not

acceptable to “daisy-chain” the floor-mounted outlets, since the wiring will not fit in the conduits.

15. The A/E shall provide a system of “homerun” conduits (minimum ¾” diameter) to provide wireless connectivity throughout all buildings, including specific areas such as the Administration, Media Center, Cafeteria/Cafetorium, Auditorium and all open courtyard areas. The location of the raceways shall be determined by M-DCPS Information Technology Services (ITS) during Phase III of the design.

16. The A/E shall provide a dedicated cable tray for sole use by M-DCPS Information Technology Services (ITS). The dedicated cable tray shall be provided in each building leading from each communication closet and running the entire length of the corridors. Under no circumstances shall the Contractor use this cable tray for placement of in-contract wiring.

The next group of items for Division 13 is new requirements for the Security Camera System (SCS). The A/E shall comply with all of the new Design Standards for the SCS. Prior to beginning the design for the System the A/E shall meet with M-DCPS Division of Facilities Design and Standards to obtain the appropriate updated Master Specification Guideline sections.

17. Provide the required provisions for a not-in-contract (NIC) security camera system (SCS) with a minimum number of camera locations as follows:

A. Primary Learning Centers:	12
B. Early Childhood Centers:	20
C. Elementary Schools:	48
D. K-8 Centers:	64
E. Middle Schools:	64
F. Senior High Schools:	120
G. Additions & Modular Buildings:	Quantities will vary depending on the projects scope

Note: Quantities indicated above are approximate and will vary depending on the scope of work and design solution for the facility. The location and camera quantities shall be coordinated with the M-DCPS Police, Region Office, Principal, and the M-DCPS Capital Task Force, prior to bidding. The location and camera quantities shall be reviewed and approved by M-DCPS during the Phase III review.

18. The SCS Control Room shall be a minimum of 8’ wide x 12’ long. The room finishes shall be the same as that of a typical Administration office. Designate an 8’-0” wide wall area, from floor to ceiling, to accommodate security camera racks, and other wall mounted equipment. The main distribution frame (MDF) shall be located in the SCS Control Room. The

SCS Control Room shall be a secure, lockable room with no windows or vision panels. It shall be provided with a supplemental HVAC system in order to maintain a temperature of 75 degrees F. and a relative humidity of 60 percent for after-hour use.

19. At each intermediate distribution frame (IDF) location, provide a 4'-0" wide dedicated wall area, from floor to ceiling, with a 5'-0" clearance to accommodate security camera racks and other wall mounted equipment. It is desirable but not mandatory to provide 24-hour A/C for the IDF.

20. One (1) 1-½ " diameter conduit shall be provided from the SCS Control Room/MDF to the School's Administration Server Room installed near the network equipment area; no conduilets are to be used.

21. One (1) 1 ½ " diameter conduit shall be provided from the SCS Control Room/MDF to the School's Main Server Room installed near the network equipment area; no conduilets are to be used. Note: If the School's Administration Server Room is the Main Server Room, then one (1) 2" diameter conduit shall be provided.

22. A voice landline shall be provided for the SCS Control Room/MDF.

23. When a pole mounted camera is required, provide a minimum of two (2) 1" diameter conduits terminating at two (2) separate brooks boxes within 3'-0" of the pole. The conduits shall be run up the pole a minimum height of 14'-0" from the finished grade, and be terminated at two (2) 6"X 6" Nema-4R junction boxes.

24. Each electrical panel supplying voltage to the SCS shall be protected by a panel Transient Voltage Surge Suppression (TVSS), providing protection for each electrical phase.

25. At the SCS Control Room, provide two (2) 120V duplex (TVSS) 20 amp dedicated receptacles for each group of sixteen (16) security cameras allocated for the facility. All receptacles shall be installed on the same wall and group together.

26. At the SCS Control Room, provide three dedicated 20 amp circuits. Each circuit shall have two 120V duplex (TVSS) receptacles. One additional dedicated circuit shall be added for each additional group of thirty-two (32) security cameras allocated for the facility. All receptacles shall be installed on the same wall as the video display rack and grouped together.

27. All conduits for the SCS shall be a minimum of ¾".

28. If cable trays are installed, a conduit path shall be provided to the cable tray for the SCS cabling for all non-plenum rated ceilings.

The next group of items for Division 13 are the new requirements for the Card Access Control System. The A/E shall comply with all of the new Design Standards for the Card Access System. Prior to beginning the design for the Card Access System the A/E shall meet with M-DCPS Division of Facilities Design and Standards to obtain the appropriate updated Master Specification Guideline sections.

29. Provide a microprocessor card access control system in all new construction and designated renovation projects to monitor and control access to specific “program areas” requiring frequent after-hours access. Coordinate the location for the card access entry point with the M-DCPS Project Manager and the M-DCPS Lock Shop.

30. Card access control system shall be separate from the intrusion detection system and shall interface with the fire alarm system.

31. Card access shall be provided for all new construction and designated renovation projects for the following program areas:

    A. Administration
    B. Media Center
    C. Kitchen

32. Card access control system shall include:

    A. A proximity card reader installed adjacent to the designated entrance into the program areas. An intrusion detection keypad shall also be located within 5 feet of each designated entrance door.
    B. All perimeter doors (both interior and exterior) leading to each of the program areas shall be provided with magnetic locks controlled by the card access system. An LED display panel shall be located within 5 feet of the entrance door (designated with the intrusion detection keypad), into each program area to monitor the condition (open/closed) of all entrances controlled by magnetic locks within each of the program areas.
    C. Install the magnetic locks as called for in the finish hardware specifications. The magnetic locks shall be mounted onto the doors and doorframes. Provide a signal switch in each exit device and a motion sensor to release the magnetic lock.
    D. Provide a modem according to the manufacturer’s requirements and compatible with DCOM.

33. The card access control system shall include all necessary components, wiring for power and control to sensors, card access controls, and door hardware items or devices required for a complete operable and fully integrated system.

34. Provide an uninterruptible power supply system (UPS) for the card access control system.

35. Refer to the door hardware sections in Division 8 for additional information regarding the card access system.

The remaining items in Division 13 are related to the new requirements for the Energy Management System (EMS). The A/E shall comply with all of the new Design Standards for the EMS. Prior to beginning the design the A/E shall meet with M-DCPS Division of Facilities Design and Standards to obtain the updated Master Specification Guideline section for the new EMS. The following only represents some of the new requirements, so it is imperative that the A/E obtain the new Master Specification Guideline section to receive all of the new information for the EMS.

36. The Energy Management System (EMS) shall facilitate compliance with the US Green Building Council (USGBC) LEED (Leadership in Energy and Environment Design) for new Construction and Major Renovations Approved 2007 Version.

37. The A/E shall submit to the M-DCPS Project Manager and the EMS Commissioning Engineer (EMS-CE) who will be designated by M-DCPS for approval, a proposed “EMS Commissioning Activities List”. When the Commissioning Activities List has been approved by the EMS-CE it shall be incorporated into the construction documents.

38. M-DCPS will provide an independent EMS Commissioning Engineer (EMS-CE) to provide all of the commissioning services for the design and construction phases of the project. The A/E shall submit to M-DCPS and the EMS-CE the construction documents for review and approval. The A/E shall incorporate all of the comments from the EMS-CE into the Construction Documents prior to bidding the project.

39. If the project has already gone into construction phase the A/E shall submit for review a copy of the “Controls Submittal” to the EMS-CE as soon as it is submitted for review.

40. The controls contractor shall request a system inspection from the M-DCPS Energy Programs staff and the EMS Commissioning Engineer, before the EMS has been completed. The A/E shall request a Punch List Inspection for the EMS from the M-DCPS Energy Programs staff and the

EMS-CE when the project has achieved Substantial Completion. The final operational tests for the EMS equipment shall be performed by a certified, factory-trained technician employed by or under the direct supervision of the EMS equipment manufacturer, and the EMS-CE.

41. The EMS shall be microprocessor based and include the following elements:

    A. All hardware and software provided shall conform to BACnet ASHRAE standard 135-2004 to promote interoperability between all building subsystems. For each BACnet device, the device supplier must provide a PICS document showing the installed device's compliance level. The minimum compliance that is acceptable is Level 3; with the ability to support data read and write functionality. All BACnet products must be approved by BTL (BACnet Testing Lab). The physical connection of the BACnet devices shall be via Ethernet.
    B. The control system shall be supplied with a complete web enabled package, hardware and software. The system shall support multiple users, using standard web browsers such as "Internet Explorer" and "Netscape". The web server software shall operate on standard industry PC servers. A manufacturer web-server/controller is also acceptable. Web browser software shall be manufactured by the control system manufacturer and shall have the same look and feel as the operating system. Third party web software is not acceptable. Interactive graphics shall be implemented. The web software shall have an Interactive Graphic Interface, including major system components and one "Virtual Override Panel" with a 3-hour timer at each zone, for after hours.
    C. If an existing School has an existing Override Panel the EMS contractor shall provide all the material, programming, cabling and connections to upgrade and interface the new EMS with the existing Override Panel. If the existing School does not have an override panel the EMS contractor shall provide and install a new "Virtual Override Panel". The override panel provides 3 hours of mechanical cooling each time the zone is activated. Provide one zone per each floor for override purposes.
    D. Provide an "Enhanced Hurricane Protection Area" (EHPA) Emergency Shelter Manual Override for use by authorized on-site staff to temporarily activate cooling, ventilation and lighting loads controlled by the EMS. One EHPA Emergency Shelter Manual Override shall be installed in all schools designated by MDCPS as a Public Shelter.
    E. Provide one laptop computer and the necessary software cables interfaces and connectors to upload and download any and all type of controllers installed by the Controls Contractor as part of the

EMS system. They shall be delivered to the M-DCPS Energy Programs Staff for each EMS installation for all new facilities, new modular buildings, or EMS school system upgrades.

F. The contractor shall install the CO_2 based demand-controlled ventilation for constant volume, and variable air volume system. When the Outside Air Unit (OAU) units are started after the optimum start/stop program has ended, (classroom occupied mode) the control system will start modulating the outside air damper from a minimum to a maximum CFM, to maintain maximum PPM in the AHU return air by reading the CO_2 sensor installed in the return for the AHU unit. At the end of the OAU time schedule the damper will close, and modulate to maintain the maximum CO_2 set-point. (The set-point levels shall comply with ASHRAE 62.1-2004).

G. The contractor shall provide a KW monitoring meter for the school. The KW monitoring meter shall be located in the Administration Office. The KW monitoring meter shall have a BACnet interface device to provide KW real time consumption for monitoring and load shedding programs that are controlled by the EMS.

H. The contractor shall provide two water consumption monitors for the schools domestic water meter and the irrigation system water meter. The water consumption monitors shall be located in the Administration Office. The Water consumption monitor shall have a BACnet interface.

42. MDCPS Network Services has reserved a group of IP addresses at each School for the Energy Management System interconnectivity as follows: The first 4 digits are the School IP address. All communication from the EMS system shall be done via MDCPS intranet. It is the controls contractor responsibility to provide the conduit, CAT5 wire and connections from the EMS controller to the network router or switch. Phone line interfaces are not allowed.

XXX.XXX.XXX.78	Main EMS Address
XXX.XXX.XXX.79	Spare
XXX.XXX.XXX.80	Chiller 1
XXX.XXX.XXX.81	Chiller 2
XXX.XXX.XXX.82	Chiller 3
XXX.XXX.XXX.83	Spare
XXX.XXX.XXX.84	Spare

43. Critical alarms shall be sent via e-mail to the appropriate Maintenance Regional Center, (RMaC) for the school, and to a designated maintenance printer. Critical alarms shall include the following:

A. Chiller failure

B. Pump failure
C. AHU failure
D. CO_2 over limit
E. Variable Speed Drive Failure
F. Cooling tower water Alarm
G. EHPA activation

44. Critical energy savings related alarms shall be sent via e-mail to the Central Monitoring Station at the School Board Administration Building (SBAB) and to a designated printer located at the SBAB. The critical energy savings alarms shall include the following:

A. Pump Manual Override
B. AHU Manual Override
C. CO_2 over Limit
D. Outside Air CFM out of range
E. Variable Speed Drive Failure
F. Cooling tower water Alarm
G. Lighting Control Panel Failure / Manual Override
H. EHPA activation

45. Occupied/unoccupied - schedules and set-points: All installed systems shall have a programmed preliminary start/stop time schedule and, occupied and un-occupied set points for VAV boxes AHU units and all mechanical systems. The contractor shall not leave any mechanical systems permanently “ON” 24/7. Override temporarily the system 24/7 only after it is approved in writing, by the M-DCPS Energy Program staff or the M-DCPS Project Manager.

Chiller Plant Request is activated when at least one AHU unit is activated in the building, by regular schedule or by the override panel. The chiller manufacturer shall provide a BACnet protocol gateway to connect the EMS system.

Note: Flow safeties, condenser and chilled water pumps, start and stop by the internal chiller control panel.

46. System Schedule and Set-Points: Return air CO_2 maximum in all locations set point levels shall comply with ASHRAE 62.1-2004. Program and activate the following minimum schedules to start/stop mechanical equipment with active set-points as follows:

A. Occupied mode AHU Classrooms;

Supply air temperature occupied set point: 55°F

Monday	Start at	5:00 AM	8:00 PM
Tuesday- Friday	Start at	6:00 AM	8:00 PM
Saturday	none		
Sunday & Holiday	none		

B. Occupied mode VAV Classrooms; (OAU Schedule)

Classroom occupied cooling set point:	74°F
Classroom occupied heating set point:	68°F
Classroom unoccupied set point:	94°F

Monday –Friday	Start at	7:00 AM	4:00 PM
Saturday	none		
Sunday & Holiday	none		

C. Occupied mode office, common areas:

Office occupied cooling set point:	74°F
Office occupied heating set point	68°F
Office unoccupied set point:	94°F

Monday – Friday	Start at	5:00 AM	8:00 PM
Saturday	none		
Sunday & Holiday	none		

D. Occupied mode Kitchen:

Occupied cooling set point:	74°F
Occupied heating set point:	68°F
Unoccupied set point:	94°F

Monday –Friday	Start at	5:00 AM	6:00 PM
Saturday	none		
Sunday & Holiday	none		

E. Emergency Shelter mode (EHPA):

Office occupied set point:	74°F

Occupied mode Shelter	
Monday – Sunday	24 hours & 7days

F. Central Control Station:

- At the M-DCPS Energy/Communications Center located at the SBAB for continuous monitoring and programming of HVAC,

alarms, lighting, power consumption, chiller upstart, and creating a historical database.
- PC computer with printer and color LCD monitor equal to Acer AL 1916WABD Wide 19" shall be upgraded to the latest hardware and software version.
- Provide all necessary software and hardware components for a fully integrated, functional system.

G. School Energy Control Station:

- PC computer with printer and color LCD monitor.
- For use by the authorized on-site staff with password access protection to temporarily monitor HVAC and lighting loads controlled by the EMS.
- To provide the "Real Time Energy" usage information on site via touch screen or display only. LCD display equal or larger than Acer AL2216WBD.

47. The control points shall include points as described in the Master Specification Guideline section and shall include at a minimum the following:

A. HVAC: chillers, pumps, cooling tower fans and ventilation and exhaust fans.
B. Boiler and water heaters.
C. Interior and exterior lighting.
D. Status of the fire and intrusion alarm systems.

48. Provide appropriate surge protection for all of the EMS equipment.

49. Communications between M-DCPS Energy/Communications and field/unitary control processors shall occur on the IP Intra-network.

50. Provide and install one CAT5 network cable from the EMS controller to the nearest communication closet.

51. Provide and install the school over-ride panel in the school administration area within view of the Principal's office. Installation shall be flush mounted with a temperature display only.

52. All ventilation fans shall be controlled through the EMS and software interlocked with corresponding air handling units.

53. All mechanical, electrical, janitors, storage and service rooms shall have a motion detector lighting control.

54. All exterior lighting shall follow USGBC Schools Reference Guide Light Pollution Credit 8 – 2007 and shall be controlled by the EMS.

A. The lighting control system shall comply with USGBC Schools Reference Guide Lighting System Controllability – 2007.
B. The exterior corridor lighting circuits shall be controlled through the EMS to provide two levels of illumination.

- Full illumination shall only be energized during periods of scheduled evening occupancy.
- At all other evening hours provide reduced level of illumination for security purposes. The reduced level of illumination shall be in effect from sunset unless the facility is an Adult Education Center/Community School. The illumination level shall be the same as required for parking lots.
- The exterior lighting shall be controlled with an additional photocell sensor in series with the EMS control point by hardware or software.

Division 14 – Conveying Systems

1. ThyssenKrupp Elevators are no longer an approved manufacturer to be used for M-DCPS projects.

2. The A/E shall require in the construction documents that the elevator manufacturer provide a separate proposal for a five-year maintenance contract for all of the elevators for the project, along with the bid. M-DCPS will evaluate the proposal when the project has achieved Substantial Completion.

3. Elevator pits shall be waterproof and designed to provide a dry pit area that includes the following:

A. A sump pit that is 18 in.x18 in.x24 in. deep.
B. A sump pump.
C. Sump pit grating shall be galvanized steel or heavy-duty fiberglass/polyester.
D. The floor shall be level.
E. Metal ladder, if pit is deeper than 3'0".
F. Two moisture-proof light fixtures per elevator pit.
G. One grounded duplex receptacle.
H. No PVC or plastic pipes in pit.

Division 15 – Mechanical

1. The use of solar water heating shall be evaluated and presented to M-DCPS Division of Facilities Design and Standards for consideration and possible approval.

2. The use of waterless urinals shall be evaluated and presented to M-DCPS Division of Facilities Design and Standards for consideration and possible approval. The A/E shall submit product type and the product specifications for review and possible approval by M-DCPS Division of Facilities Design and Standards. If waterless urinals are provided there still needs to be domestic water piping rough-in to the location.

3. HVAC shall be provided to all instructional spaces and to additional areas as required by M-DCPS Design Standards.

4. All custodial closets for new facilities shall be a minimum of 25 S.F. and receive a 24” x 24” floor sink. Do not use wall-mounted sinks except for an existing custodial closet that is too small to receive the floor sink.

5. Paint all above ground exposed fire sprinkler piping, fittings and valves located within mechanical and electric rooms with a minimum of 10 MIL rust proof fire protection red paint. Also paint the fire sprinkler piping, fittings and valves in any space that has high humidity or is not an air-conditioned space. Exposed fire sprinkler piping in all other occupied spaces without a ceiling shall be painted to match the adjacent color schemes, and shall be minimally identified as required by ANSI/ASME A13.1-1996. When the piping is installed in a concealed above the ceiling space, which is located over an air-conditioned room it shall not be painted. Under no circumstance should the sprinkler heads or cover plates be painted.

6. All natural-gas services shall be provided to each school site by means of one (1) common gas meter only.

7. When using screw set fittings, they shall be stainless steel. Compression fittings that comply with M-DCPS Design Standards shall be used when stainless steel screw set fittings are not provided.

8. Mechanical rooms that are adjacent to occupied spaces and that are subject to condensation and water leaks, etc. shall receive epoxy flooring with integral epoxy base. Do not install epoxy flooring when the Mechanical Room is in a separate stand-alone building such as a chiller building.

9. Prior to the completion of the mechanical design the A/E shall test the water source to be used for all water-based air conditioning systems. When the supply water has a hardness content of 180 PPM or higher the

A/E shall include a water softener system in the design. The water softener system will typically be required for facilities located in the southern portions of Miami-Dade County.

10. The A/E shall specify that all Air Handling Units with speed drives shall be installed with 3-phase monitors for protection of the motor with an automatic restart feature, such as ICM 450 or approved equal. The 3-phase monitor must monitor the main voltage and control voltage. The phase monitor shall trip due to phase loss, phase imbalance, under voltage and over voltage. The phase monitor safety cut off shall cut power to the main control transformer secondary in the drive. This will drop power to all controls and devices. They shall be set to auto-restart when the power comes back corrected within the parameters. The phase monitor shall automatically reset the secondary power of the control transformer and the speed drive will automatically restart.

11. As recommended by the cooling tower manufacturer, provide platforms with guardrails, ladders, and safety cages necessary to access tower for equipment maintenance, unless deletion is approved by M-DCPS Maintenance Operations on a per condition basis.

12. The sound generated by any outside chiller, air-cooled chiller, air-cooled condenser, or cooling tower shall not exceed 70 dbA at a distance of 30 feet and 55 dbA at any property line.

    A. A sound barrier wall with chain-link and a 3 sided masonry wall shall surround the equipment if the dbA requirements above are exceeded. See Division 2 for additional fencing requirements.
    B. The masonry wall height shall be as tall as the top of the fan deck.
    C. Locate equipment as far as possible from school buildings as well as adjacent off-site construction.

13. Roof top Equipment - Overturning and uplift forces on rooftop equipment and curbs shall be calculated and designed following ASCE 7 and approved by the Florida registered structural engineer of record for each project. Design curbs, hold-downs and equipment casings to withstand forces stated or implied in Roof Wind Pressure diagrams in the Contract Documents.

14. Equipment Curbs - Add the following to each specification section for rooftop equipment:

    A. Rooftop equipment overturning and uplift forces shall be calculated and designed for and fabricated in all equipment casings, equipment, hold-downs, and curbs (whether integral or loose) following ASCE 7 and approved by the Florida registered structural

engineer of record for each project. Design curbs, hold-downs and equipment casings to withstand forces stated or implied in Roof Wind Pressure diagrams in the Contract Documents.

B. Curbs - Whether integral with the equipment or separately provided, following the requirements for properties such as height, material, insulation, fastenings, and hold-downs as stated in the new Master Specification Guideline for Roof Assembly Equipment Curbs in Division 07.

The following list of items for Division 15 are the new requirements for M-DCPS air conditioning “Cooling Sources”. The A/E shall comply with all of the new Design Standards for the cooling sources. Prior to beginning the design the A/E shall meet with M-DCPS Division of Facilities Design and Standards to obtain the appropriate updated Division 15 Master Specification Guideline sections.

15. Cooling Sources - Alternative cooling sources shall be evaluated and determined by life cycle costs analysis with M-DCPS Division of Facilities Design and Standards approval.

16. An existing central refrigeration plant shall be used for a cooling source if available for present or future use.

17. Interconnect chillers if distance between new and existing is less than 100 feet.

18. Total system capacity for chillers and condensers shall comply with the following:

    A. Up to 25 tons - Reciprocating or scroll, air-cooled
    B. 25 tons to 200 tons - Rotary, scroll air-cooled
    C. 100 tons to 800 tons - Rotary screw or centrifugal, water-cooled
    D. 800 tons and above - Centrifugal, water-cooled

19. All chiller surfaces subject to condensation shall be provided with a premium insulation package. The package shall result in a minimum “Amarflex” insulation thickness of 1-1/2”.

20. Reciprocating and scroll refrigeration compressors units shall be used for small loads.

21. Provide one propeller type flow measuring device per project. Provide taps at each chiller’s chilled water and condenser side, and if not independently piped, at each cooling tower’s condenser piping. Taps shall be provided with sufficiently large ball valve screwed fittings and caps to be able to introduce the flow measuring device without water spillage.

22. Provide each chiller with four liquid filled pressure gauges with pressure snubbers and gauge cocks graduated in feet of water. All pressure gauges shall be scaled to read at their midpoints. Maximum intervals shall not exceed 2 feet of water.

23. Packaged DX split systems with reheat coils, intertwined evaporator coils, thermostatic expansion valves and unloading compressors may be used for small buildings less than 10 Tons on a per condition basis when pre-approved by M-DCPS Division of Facilities Design and Standards.

24. Combination heater and refrigeration packaged units may be used at small buildings on a per condition basis when pre-approved by M-DCPS Division of Facilities Design and Standards.

25. Heat pumps shall be avoided, but may be used for small individual instructional spaces on a per condition basis when pre-approved by M-DCPS Division of Facilities Design and Standards.

26. The use of multiple individual classroom DX units is not allowed.

27. Packaged air-cooled chillers with at least 4 compressors each with independent refrigerant circuits shall be used for loads less than 200 tons. Each compressor shall be provided with individual factory installed breakers.

28. Manufactured packaged systems shall comply with the following consumption limitations:

    A. 1.26 maximum KW per ton for units with less than 25 tons capacity
    B. 1.20 maximum KW per ton for units with greater than 25 tons capacity

29. Water-cooled systems shall be used when the systems are over 200 tons. The A/E shall investigate FPL incentive programs.

30. All chillers, AHU's and fans shall be connected to the fire alarm system. All chillers, AHU's and outside air intake fans shall shutdown upon activation of the fire alarm system.

Division 16 – Electrical

1. The use of electric hand dryers in student, staff and public restrooms is not allowed.

2. Classroom lighting shall be capable of two lighting levels. One mode at full level lighting and one mode at reduced lighting level. The two levels of

lighting shall be switched from front to back to allow for the darkening of the front of the Classroom for audiovisual presentations.

3. The use of pendent type lighting for classrooms and administration spaces is permitted only when approved by M-DCPS Division of Facilities Design and Standards on a per project basis. The A/E shall submit the proposed pendent light fixture manufacturer and specifications, for review and possible approval by M-DCPS Division of Facilities Design and Standards.

4. The exterior corridor lighting circuits shall be controlled through the EMS to provide two levels of illumination. Full illumination shall only be energized during periods of scheduled evening occupancy. At all other evening hours provide reduced level of illumination for security purposes. The reduced level of illumination shall be in effect from sunset unless the facility is an Adult Education Center. The illumination level for the Corridors shall be the same as required for parking lots, (See 2007 Design Standards Supplement, Division 13 item #54 for additional information).

5. The use of solar outdoor lighting products for parking lots, sidewalks and roadways shall be evaluated by the designer and presented to M-DCPS for consideration. The A/E shall submit product type and the specification to M-DCPS Division of Facilities Design and Standards for review and possible approval.

6. The placement of outdoor lighting for parking lots, sidewalks and roadways shall be designed to avoid light pollution onto adjacent property. The A/E shall select outdoor light fixtures that shield the light from spilling beyond the area intended to be illuminated.

7. Solar-powered school speed zone flashing lights system shall be incorporated into the design of facilities. The solar-powered flashers shall comply with all Miami-Dade County Public Works criteria and requirements.

END OF DESIGN STANDARDS 2008 SUPPLEMENT